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ANNUAL REPORT

OF THE

ADMINISTRATION OF COORG

FOR THE YEAR

1865-66.

Military Orphan Press.—No. 8 H. D.—29-12-66.—100.

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INTRODUCTION.

1. As the Report for last year contained a full account of the landed tenures in Coorg, it is thought unnecessary to recapitulate it. The collections from Coffee lands which now bear an acreage assessment, in lieu of the "halut" or excise formerly chargeable on the produce, have been included this year under the head of Land Revenue, and amounted to Rs. 21,552-7-2. A comparatively small number of Coffee estates, however, have as yet come under this assessment, which, as previously explained, is under the newly introduced rules levied at the rate of Re. 1 per acre from the 5th to the 9th year, and of Rs. 2 per acre, in and after the 10th year of cultivation.

Land Revenue.

2. The extent of Coffee land already surveyed and brought under assessment up to the present time amounts to nearly 18,000 acres, and though no exact calculation can be made, pending the completion of the survey, as to the number of acres remaining to be assessed, the approximate area under Coffee cultivation is estimated as varying from 70,000 to 100,000 acres, which would thus yield ultimately a revenue from this source of about 2 lakhs of Rupees.

3. The Land Revenue proper shews a net increase, due principally to extension of cultivation, of Rs. 6,888-11-6. It is observed, however, that while there is an addition under this head of Rs. 638-7-2 on account of jumma lands brought under the higher assessment of the "Sagoo" tenure, the diminished revenue arising from the conversion of "Sagoo" into jumma lands amounts to Rs. 1,385-9-5. This result may be attributed to a desire on the part of the jumma ryots to avail themselves of the concession in regard to the sub-letting of jumma lands, which have been in contemplation for some time past.

4. In the introductory notes attached to last year's Report, allusion was made to the subject of sub-letting of jumma lands, and the question has since been brought to a determination (*vide* correspondence attached in appendix).

Sub-letting Jumma lands.

5. The doubts as to the propriety of relaxing the prohibition which has always existed in regard to the sub-letting of jumma lands, related more particularly to the danger of letting the richer and more influential Coorg families acquire too great an ascendancy, by the command which they would be able to maintain over foreign imported labor, and the abuses to which this would give rise in swamping and well nigh ex'in-

guishing the poorer classes of jumma ryots. It was not quite evident also at that time, that the desire for this innovation had not emanated chiefly from the official classes, whose interests could of course be hardly considered to represent those of the Coorgs generally.

6. The enquiries I had instituted during my visit to Coorg in the cold season of 1864-65, were sufficient however to assure me that the wish was universally felt, and that the danger adverted to above was not apprehended by any of those classes who would most likely be affected by the measure. The difficulties which stood in the way of carrying it out, were, therefore, to a great extent, removed, and the consideration of the question then resolved itself into the two following points, *viz*:—

1*st*.—Whether, if the old tenure was relaxed as regards sub-letting, a higher rent than that levied from jumma ryots, *i. e.*, Rs. 5 per 100 butties, say 3 acres, could be demanded by the State?

2*ndly*.—Whether any and what restrictions should be placed upon the sub-letting of the jumma lands?

7. As regards the 1st point, no change seemed desirable. The ryots' profits are not great, having regard to the national custom of the Coorgs, of all the members of a family residing in one house on their ancestral lands, and, with the loss of indigenous labor added, they are left far behind in the race with European capital and enterprise, while, so far as the interests of Government are concerned, it would not be advisable to exercise the right of raising the jumma rents, but it would be better to trust to increased cultivation to supply the deficiency in the Public Revenue.

8. On the 2nd point, it is shewn by the Superintendent in his letter of 28th August 1865 (*vide* appendix), that safeguards have already been provided to prevent the undue preponderance of any particular class in monopolising lands and labor. The local law of the country prescribes that when a jumma ryot gives up his land, the following persons have a preferential claim to it, *viz*:—

1*st*.—The Wurgdar.

2*nd*.—The proprietor of the adjoining estate.

3*rd*.—The inhabitants of the same village.

A further restriction existed in the circumstance that the Coorgs had never shewn any disposition to sell their lands, however urgent their distress, but merely to sub-let it on a "Warrum" tenure, or equal division of crops.

9. The preservation of these checks seem indispensable, if the relative position of the several classes among the jumma ryots themselves is to be maintained; for, indiscriminate sub-letting would undoubtedly enable the more powerful ryots to secure all the available labor to the exclusion of their poorer neighbours, though the danger arising from the admission of proprietors of foreign origin, cannot occur so long as the sale of jumma lands is prohibited. It was therefore proposed that, as a tentative measure, the privilege to sub-let should be restricted in the first instance to a portion of the wurg or farm, which has now been fixed at ¼ of the entire holding of the individual ryot, subject to further extension hereafter if the results should prove favorable. This proposition was further accompanied with the proviso, that "Sagoo," or full rates of assessment, shall

be levied on all fresh lands taken up by ryots, who have sub-let any part of their jumma holdings, and that no jumma lands can be sub-let to Sagoo ryots.

10. The sanction of the Government of India to this measure having been received, only at the latter end of the past year, sufficient means have not yet been afforded of judging of its results, or of ascertaining the extent to which this privilege has been availed of generally.

11. The proportionate amount of assessment, derived from the two descriptions of tenure, is shown as follows:—

	Rs.	A.	P.
Jumma lands assessment	48,182	1	11
Sagoo „ „	88,897	4	11

12. On the other hand, the practice of the old Coorg families, to congregate under the same roof and to leave the management of the farms to one head, is exemplified by the large excess in the number of Sagoo ryots over that of the other class, *viz*:—

Jumma ryots	... 3,274.
Sagoo „	... 5,694.

Abkaree.

13. The Sudder Distillery system had not been introduced into Coorg during the past year, owing to some difficulties which have occurred in carrying it into effect. The final sanction of Government having recently been received, arrangements had been matured for instituting the new system during May 1866.

Education.

14. A pleasing picture is drawn by Captain Cole of the rapid spread of education among the Coorgs, who met the first attempts, made 10 years ago by the Reverend Mr. Moegling to establish a school at Mercara, with the most determined opposition. The feeling now is one of universal appreciation of the benefits conferred by education, and the sincerity of this feeling has been amply testified by the readiness with which the principal men amongst the Coorgs have contributed from their private means to the endowment of the Central School, as well as to the erection of a Boarding house, where the youths who are sent to Mercara from their homes, in the outlying Nads, may be lodged and cared for during their attendance at the Government School. A great improvement is observable in the condition of the District Schools, which have now been brought under the more direct control of the Head of the Government School. There are now 24 of these schools in the province, affording education of a rudimentary kind to 736 youths and about 30 girls. It is gratifying to observe that the necessity of devoting more time and attention than is ordinarily the case, to educating the students at the Government School in the Canarese Vernacular, has been perceived and acted upon. The unhealthy craving for a wholly English education, which is so general elsewhere, finds no place here, and the study of English books is almost entirely restricted to the highest class in the School.

Public Works.

15. The progress made in carrying out Public Works, during the past year, has been summarized in the Officiating Chief Engineer's Report, which will be found in the appendix. The largest item of expenditure on a single project related to the works on the Mercara-Codlipett road,

which have since been suspended by the Budget Orders recently received from the Government of India. The other works consisted chiefly in re-metalling portions of the Sumpajee and Periambaddy ghauts, and in repairing injuries sustained by roads and bridges from the destructive effects of heavy rains and floods. On the whole, the limited funds at the disposal of the Department in Coorg, seem to have been utilised as far as possible.

16. The present condition of Public Works in Coorg, and their further extension in order to keep pace with the increasing requirements of a province, in which large interests are involved, have been comprehensively treated in a memorandum drawn up by Major Sankey, then Assistant to the Chief Engineer, and have formed the subject of the correspondence marginally noted, which will be found in the appendix, together with the memorandum referred to. After alluding to the injurious effects caused to the Public Works in Coorg, by the extensive denudation of forests for the purposes of Coffee cultivation, Major Sankey, in this memorandum, entered into a detailed examination of the several ghaut roads and lines of communication which traverse the province, and pointed out the defective tracing of many of these lines, and the special difficulties in regard to their efficient maintenance, which were presented by the natural features of the country.

Memorandum by Col. Lawford, R. E., Chief Engineer in Mysore, dated 13th November 1865, (forwarding Major Sankey's Memorandum on the state and prospects of the P. W. Department in Coorg). From Commissioner of Coorg, to Secretary to Government of India, Public Works Department, No. $\frac{442}{12}$. dated 15th November 1865. To. Do., from Do., No. 35 c, dated 13th January 1866.

17. The following are the chief points to which attention was directed:—

1*st*.—The excessive gradients of the upper portion of the Mercara-Fraserpett road, which would necessitate the diversion of the route, by a short line connecting Santecoopa with the new road between Mercara and Codlipett.

2*nd*.—The construction of a new line in a south-west direction from Mercara, leading to Santecoopa in one direction, and to Veerajendrapett in the other.

3*rd*.—Reconstruction of first three miles or so of the Mercara-Veerajendrapett road, and of portion of both the Sumpajee and Periambaddy ghaut roads.

4*th*.—The completion of the Mercara-Codlipett road, omitting the Mahadapoor and Huttyhully bridge works, and of the Veerajendrapett-Siddapoor road.

5*th*.—The construction of the Moornad bridge over the Cauvery, and the re-building of the Ganicopal bridge on the Periambaddy road. Lastly, it was proposed to open out new lines of communication which should, in the first instance, consist of pack bullock roads, three yards wide, with log bridges capable of future extension. The necessity of a large increase to the existing establishment in Coorg was further urged as indispensable to the proper supervision and execution of the projected system of works.

18. A scheme for the complete reorganization of the Public Works Department in that province has accordingly been recently submitted to the Government of India, and though in modification somewhat of the Chief Engineer's proposals, the increased efficiency which may be looked for from its adoption, will conduce largely towards placing the Department on a more satisfactory footing than it has hitherto occupied.

19. In submitting Major Sankey's memorandum, the Chief Engineer, Colonel Lawford, expressed his entire concurrence in the views and proposals put forward, and added, para. 9th :—"The comprehensive view "taken by Major Sankey of the best means of improving the main ghaut "roads, and opening the interior communications of Coorg, is, in my "opinion, perfectly correct, and it is only from the want of information, "as to the actual state of these roads, and their immense value to the "country, that the Government of India has hitherto formed such "limited ideas of the means required for their adequate improvement, "&c. Para. 10.—Coorg has been a wilderness, and is fast becoming a "garden, the produce of which will be valuable in proportion to the "facilities of export, which all our present efforts fail to improve correspondingly with the spread of cultivation."

20. The several proposals contained in Major Sankey's memorandum were reviewed in the Commissioner's letter to Secretary to Government of India, Public Works Department, No. $\frac{442}{25}$, dated 15th November 1865, and replied to in Colonel Dickens' letter, No. 35 c, dated 13th January last, in which sanction was conveyed to the relinquishment, as proposed, of several projects which were not of an urgent nature; but the final orders of the Government were reserved with regard to the works marginally noted, pending an explanation, which has been since submitted, on several points connected with the estimated cost of road repairs.

	Rs.
Reconstruction of 16 miles of Ghaut ...	1,28,000
Completing Mercara-Codlipett road ...	50,000
Making Veerajendrapett-Siddapoor road	30,000
Cauvery Bridge at Moornad	60,000
Rebuilding Ganicopal Bridge ...	26,600
Minor works	12,400
Metalling Ghaut roads	3,74,192

21. As the District is in a flourishing condition, with a surplus revenue, and, as, whether regarded in a political or financial point of view, it is of extreme importance that sufficient provision should be made yearly, not only for the maintenance of existing ghaut roads, but also for opening new lines of communication, on which so much of the prosperity of the country depends, I earnestly trust that the present insufficient Public Works allotment of one lakh may be enhanced to one and half, or, if possible, to two lakhs* yearly, or justice will not be done to this interesting division of the Empire. With the limited funds at our disposal, it is impossible to combine the efficient superintendence of four ghaut roads, and a speedy and accurate rendering of accounts. The Executive Engineer, who has no Assistant, finds his time so fully occupied, that he has no leisure to attend to the repairs of tanks, or to devise new irrigation projects, many of which, it is asserted, might be undertaken with great advantage to Government.

* Two lakhs have been since sanctioned for 1867-68.

22. Excluding a small balance of Rupees 8,080-1-8, remaining from the previous year's demand, and still in process of recovery, the amount outstanding on the 1st April 1866, was Rupees 47,936-6-3, of which Rupees 25,933-12-0 have been since recovered, leaving a net balance of Rupees 22,002-10-3, which is chiefly due on account of newly assessed estates and cardamom jungles, and which the small over-worked establishments have been unable as yet to bring to book. The need of some augmentation of these establishments, which have not kept pace with the considerable changes that have taken place during the last few years, has been sorely felt in all Departments, and has been commented upon in another place.

Financial.

23. As in the previous year, the increased expenditure during this year, is due entirely to the head of Public Works, upon which the outlay amounted to Rupees 1,06,000, while in the Civil and Military charges there was some decrease effected.

Expenditure.

24. The Registry of deaths, in the principal towns through the Province, has been for the first time carried out systematically, and the result obtained, from the Returns of the six largest towns, gives a percentage of 3·65 deaths to population.

Mortuary Returns.

25. The cultivation of Cinchona has scarcely as yet exhibited any marked results, owing probably to some want of experience as to the conditions most favorable to its growth in the Coorg climate, and consequently to defective treatment, which, with the attention now directed to the subject, both by the Superintendent and by private individuals, will no doubt speedily be remedied.

Cinchona Plantation.

26. A brief extract is appended from the Assistant Conservator's Report, describing the principal results obtained during this first year of the operations of the Forest Department, in a general survey and inspection of the forests. The Teak ranges are found to be almost wholly in the southern and eastern parts of Coorg, and both there and in the northern tracts, there are several species of valuable timber, which it will be the object of the Department to work with profitable results.

Forests.

27. The subordination of the Assistant Conservator to the Superintendent of Coorg may, in the peculiar circumstances of the province, be regarded as indispensable to the efficient working of the Department.

28. The work performed in the year by the Survey Department, indicates a somewhat slow rate of progress, as regards the actual area measured; but, on the other hand, a larger number of Coffee estates have been surveyed than in the preceding year. On this point, the Officer conducting the survey, remarks :—"Coorg is a very difficult country to survey, and, the "small estates, which are innumerable, and have at some time or other to "be surveyed, give much more trouble in comparison to their size than "larger ones, without contributing much to the out-turn." The progress of the survey has been to some extent impeded, moreover, by the defective work performed by the former surveyor, and the ground has had in a great measure to be retraced.

Survey.

29. The plan followed in this survey, which, it may be observed, is confined wholly to the mapping out of Coffee lands, is first to demarcate the boundary of every village in which there are Coffee lands, and then to group a series of villages, within the compass of a single survey map, in which is given the boundaries of estates, rivers, roads, and all the main features of the country.

Registration of Assurances.

30. The Superintendent of Coorg refers, in para. 151 of his Report, to the doubtful validity of the puttahs or grants held for Coffee lands in Coorg, owing to their not having been registered under the provisions of the Act. It is to be remarked, however, that such documents are not invalidated in all cases by the defect of non-registry, and that registration under the Act is essential to the validity of a deed, and, therefore, compulsory only in the case of documents, bearing a date subsequent to the introduction of Act XVI of 1864 into Coorg, on the 3rd June 1865.

Trade Statistics.

31. Some attempt has been made to obtain statistics of the traffic passing out of Coorg, by the Sumpajee and Periambaddy ghauts leading down into the Konkon. These returns merely show, however, the number of carts, &c., which have traversed the roads mentioned, but with the means available in the employment, under careful restrictions of the toll-keepers stationed at the foot of the ghauts, it will, perhaps, be possible to procure hereafter, statistics of a more complete kind in respect to the quantity and value of the traffic.

General Remarks.

32. The District continues to flourish, and the body of Planters to increase. Skill and enterprise, on the part of the planters, have given an importance to this small tract, which is fast destroying its seclusion, and opening the minds, as well as the country, of the Coorgs. The material prosperity is great, and would be a cause of unmixed satisfaction, were it not that the high prices and enhanced rates of labor tell severely on the miserably paid class of Native officials. Their claims to an increase of their scanty allowances were preferred, with my support, last year, but the Government were not prepared to admit them. They have again been brought forward this year, as yet without a reply being received; and, indeed, it does not seem fair or becoming to pay officials, in the position of a Sub-Tehseeldar, ten, when coolies are getting six and seven Rupees, while hired labor fetches what is mentioned, the peons receive five Rupees only.

33. It is scarcely in my province to pronounce an opinion upon the prospects of Coffee planting, but there can be no doubt that landed property has greatly increased in value, and it may be confidently stated, that if capital is available to bring an estate to perfection, the ultimate out-turn will be great. Europeans with their restless energy, have found their way into almost every part of the District, and although they must necessarily, sometimes, come into collision with native interests, only a single instance has been brought to my notice, in which violence has been used, and the planters, as a body, are certainly entitled to the support and confidence of the Government.

34. I much regret the loss to the District of Mr. Kerr, who was again compelled by failing health to leave his post. His service was

short but efficient; he combined an engaging demeanour with good judgment, and was respected alike by Europeans and Coorgs. Captain Cole, his successor, is a promising and energetic Officer, whose name I have previously brought to the favorable notice of Government.

The Executive Engineer, Mr. Stoddard, possesses great energy and activity, but is over-worked, and sadly wants an Assistant.

The Assistant Conservator of Forests, Mr. C. A. Dobbs, has been successful in the management of his Department, and his services have been very useful to the Superintendent.

The Native officials, mentioned by the Superintendent, continue to merit my thanks for their faithful and willing discharge of their duties.

L. BOWRING,

Commissioner.

BANGALORE,
31*st July* 1866.

REPORT

ON THE

ADMINISTRATION OF COORG

FOR THE YEAR

1865-66.

SECTION II.—REVENUE.

PART I.—LAND REVENUE.

Introduction.

1. Owing to the lamented illness of Mr. William Hobart Kerr, of the Madras Civil Service, which has again deprived this province of his valuable services, the task of submitting the Annual Administration Report has again devolved on me.

Coffee cultivation.

2. As pointed out by me in the last year's Report, the rice lands, so abundant in th epicturesque valleys of its mountainous regions, had been the principal source of the land revenue of Coorg; but the introduction of Coffee cultivation has provided a new source of income to the Government and of profit to the people. In former days these valleys were cultivated with rice, and an increase in revenue was chiefly to be anticipated by fresh valleys being opened up, or additions made to the existing Paddy lands by scarping out fresh fields from the sides of the surrounding hills, till terrace arose above terrace, as monuments of the enterprise and labor of this hardy race. The lofty hills remained covered with dark rolling forest, or opened out here and there in park-like grazing grounds, over which roamed the cattle at their will and pleasure. Now, the scene is changed; the very face of nature wears an altered aspect. The dark impenetrable forests have, in many places, disappeared before the axe of the planter, and British enterprise, skill, and capital have caused to spring up a new source of income, which may be depended upon to increase year by year, as the cultivation of Coffee extends, and to ensure the material prosperity of the province.

Acreage Assessment.

3. Hitherto the tax on Coffee has been treated as one of the extra sources of revenue; but, the halut tax having been abolished, and the acreage assessment introduced, I purpose this year to incorporate the acreage tax on Coffee lands under the head of "Land Revenue," leaving such estates as still pay the Cardamom rent to be classed under the head of extra sources of revenue, until they may also come under the acreage assessment.

4. It will, however, be as well to contrast the hitherto *ordinary* land revenue with that of the year previous, and shew the acreage assessment separately. The former amounted to Rs. 2,70,022-2-8 during the year 1864-65, and to Rs. 2,39,634-12-4 during the year under review, shewing a decrease of Rs. 30,387-6-4. The Coffee tax on such estates as had come under the acreage assessment amounted to Rs. 21,552-7-2, and thus gave a total of Rs. 2,61,187-3-6 as the *ordinary* land revenue for the year, inclusive of the items to be transferred to Forests, or a total decrease of Rs. 8,834-15-2 under this head, the particulars of which will be found under the head of Finance. The *regular* land revenue, however, had increased from Rs. 1,67,803-8-4 to Rs. 1,72,190-7-4, or by Rs. 4,386-15-0, and by the addition of the amount Rs. 21,552-7-2 of the assessment on Coffee lands, the *regular* land revenue rose to Rs. 1,93,742-14-6, or 15·45 per cent. over that of the previous year.

Land Revenue.

5. Out of the sum realized as Coffee tax, Rs. 9,088-4-8 were paid by European proprietors, and Rs. 12,464-2-6 by Natives. Large estates, however, held by Europeans, have not yet come under assessment.

Coffee Assessment by Europeans and Natives.

6. The total demand for the year amounted to Rs. 5,13,983-3-0, inclusive of a balance of Rs. 66,010-11-1 of the previous year, whilst the realizations amounted to Rs. 4,57,966-11-1, leaving a balance of Rs. 56,016-7-11, of which Rs. 31,956-1-6 were recovered by the 20th Instant.

Demand, Collection, and Balance.

7. The subjoined table will show the distribution of the *ordinary* land revenue, exclusive of Coffee tax, over the various talooks of the province :—

Distribution.

No.	Talooks.	No. of Villages.	1864-65.	1865-66.	Increase.
			Rs. A. P.	Rs. A. P.	Rs. A. P.
1	Mercara ..	57	21,669 12 3	22,045 5 0	375 8 9
2	Paddynacknad ...	55	22,562 15 1	24,031 12 1	1,468 13 0
3	Yeddanacknad ...	49	39,161 13 7	40,159 6 0	997 8 5
4	Kiggutnad ...	63	38,364 9 11	39,371 4 4	1,006 10 5
5	Nunjarajputten ...	115	19,855 6 7	20,236 11 7	381 5 0
6	Yelloosaveraseemi ...	168	26,188 14 11	26,346 0 4	157 1 5
	Total	507	1,67,803 8 4	1,72,190 7 4	4,386 15 0

In the Paddynacknad talook, Rs. 1,863-6-9 were realized from Coomry cultivation, against Rs. 424-5-11. This increase arose from old Coomry lands being cultivated, and not to any fresh forest being sacrificed to this species of cultivation.

Increase explained.

8. The increase shewn arose in the following items :—

	Rs.	A.	P.	Rs.	A.	P.
1.—Tax on jumma land given up and brought under Sagoo tenure ...	638	7	2			
2.—Waste land brought under cultivation ...	1,811	6	2			
3.—Assessment on waste lands, originally granted free for certain periods ...	2,285	5	3			
4.—Increase price of Dhooly Paddy ...	709	7	2			
5.—Coomry cultivation	1,444	1	9			
				6,888	11	6
DEDUCT.						
1.—Sagoo lands taken up on jumma tenure ...	1,385	9	5			
2.— „ „ left uncultivated	1,116	3	1			
				2,501	12	6
NET INCREASE ...				4,386	15	0

Distribution of Coffee Assessment over Talooks.

9. The distribution of Coffee assessment over the several talooks was as follows :—

	Rs.	A.	P.
1.—Mercara	11,881	15	6
2.—Paddynacknad	3,108	0	7
3.—Yeddanacknad	5,195	13	2
4.—Kiggutnad	408	3	0
5.—Nunjarajputten	904	14	11
6.—Yelloosaveraseemi	53	8	0
TOTAL ...	21,552	7	2

Forest.

10. It has been customary to count as land revenue in Coorg, the following items, which elsewhere are treated of as portions of forest revenue, but as the year under review, has witnessed the operations of a separate Forest Department, though under the immediate control of the Superintendent of Coorg, I propose including these items under their legitimate head—

1.—Rents from Cardamom lands.
2.—Sandalwood.
3.—Timber.
4.—Forest produce.

Wet Land.

11. The subjoined table will exhibit the revenue derived from wet lands, as contrasted with the year previous :—

No.	TENURES.	ASSESSMENT, 1864-65. Rs.	A.	P.	ASSESSMENT, 1865-66. Rs.	A.	P.
1	Jumma	47,264	15	11	48,182	1	11
2	Sagoo	89,332	13	10	88,897	4	11
3	Enam	11,403	7	3	11,403	7	3
4	Oombly	6,869	0	8	6,866	3	1
5	Jodee	6,183	10	4	6,227	11	11
	TOTAL ..	1,61,054	0	0	1,61,576	13	1

I may here remark that only those ryots who had received the jumma sunnuds from the ancient rulers of the country, are entitled to take fresh or additional land on that tenure.

Dry Land.

12. In hill tracts, where the rain-fall is so great, the ordinary dry cultivation is not to be found to any great extent. The assessment on such lands, in the several talooks, was as follows :—

No.	Talooks.	Jumma.	Sagoo	Garden.	Fields or Thoondoos.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1	Mercara	...	...	...	113 7 8
2	Paddynacknad ...	...	...	450 0 9	...
3	Yeddanacknad ...	...	...	...	16 11 2
4	Kiggutnad ...	...	...	...	...
5	Nunjarajputten ...	...	...	...	7,569 2 3
6	Yelloosaveraseemi ...	...	...	...	1,270 10 7
	Total ...	...	...	450 0 9	8,969 15 8

Revenue in kind.

13. Rupees 21,383-14-7 were realized as land revenue paid in kind, against Rs. 19,352-8-0 of the year previous. The increase was due to the enhanced rate at which the Dhooly Paddy tax was levied and to the increase in Coomry cultivation.

Sale of Government Lands.

14. The sum realized by the sale of Government lands for Coffee cultivation was Rs. 10,775-8-0, against Rupees none of the previous year.

Miscellaneous.

15. The amount realized this year, under this head, has been, Rs. 6,685-15-7, against Rs. 2,970-12-9 of the year previous, giving an increase of Rs. 3,715-2-10.

Remissions.

16. Remissions were allowed during the year under review as follows :—

No.	Items.	1864-65.	1865-66.
		Rs. A. P.	Rs. A. P.
1	Waste lands brought under cultivation ...	7,751 14 11	6,063 4 8
2	Land resigned	...	...
3	Salary of Potails, &c.	2,370 6 1	2,392 15 5
4	Failure of crops	132 12 0	255 11 8
5	For losses incurred by fire, &c. ...	81 0 0	74 13 11
	Total ...	10,336 1 0	8,786 13 6

Proportion of Remissions to Land Revenue.

17. The proportion of remissions to land revenue was 5·10 per cent., against 6·15 per cent. of the year previous, and, irrespective of that allowed on waste lands brought under cultivation, was 1·58 against 1·53 per cent. of the previous year.

18. The subjoined tables will shew the number of cultivating ryots, as compared with the year previous, and with those of the preceding, decades :—

Ryots.

No.	Description.	1864-65.	1865-66.
		No.	No.
1	Jumma ryots	3,308	3,274
2	Sagoo	5,828	5,694
3	Oombly	452	506
4	Cultivating dry lands	1,776	1,929
	Total ...	11,364	11,403

By Decades.

Decades.	Jumma.	Sagoo.	Oombly.	Cultivating Dry Land.
1836	2,007	2,268	10	189
1846	2,664	4,696	296	1,468
1856	3,086	5,130	360	1,501
1866	3,274	5,694	506	1,929

The decrease, shown among the jumma cultivating ryots, is chiefly due to their having joined their ancestral houses, and thus becoming re-incorporated with the family, the whole land being held in the name of the family representative.

19. The rentals realized in each talook, inclusive of house tax, and the average rent paid by each ryot, will be exhibited by the subjoined Statement :—

Rentals.

No.	Talooks.	No. of Ryots.	Total Assessment.	Average of each Ryot.
			Rs. A. P.	Rs. A. P.
1	Mercara	1,316	22,045 5 0	16 12 0
2	Paddynacknad	1,383	24,031 12 1	17 6 0
3	Yeddanacknad	1,615	40,159 6 0	24 13 10
4	Kiggutnad	1,303	39,371 4 4	30 3 5
5	Nunjrajputten	2,970	20,236 11 7	6 13 0
6	Yelloosaveraseemi ...	2,816	26,346 0 4	9 5 8
	Total ...	11,403	1,72,190 7 4	15 1 7

20. The highest rent paid by any ryot was Rs. 270-8-7, and the lowest As. 2-0, against Rs. 190-6-6, and As. 2-0, respectively, of the year previous. The largest extent of holding was 6,536¼ butties, or about 218 acres, and the smallest 1¼ butties. This was irrespective of the bané or pasture lands attached to each holding, and of the Coffee holdings.

Holdings.

21. The foregoing holdings do not include the Coffee estates, the largest of which was 5,467·97 acres.

Coffee Holdings.

Part II.—Other Branches of Revenue.

22. As may be anticipated in such a country, the forests yield the largest amount of revenue among the minor items. The demand under this head amounted to Rs. 75,456-5-0, and the collections to Rs. 58,704-7-6 leaving a balance of Rs. 8,739-13-6, out of which Rs. 3,349-7-2 has since been recovered.

Forest.

23. The sum realized during the preceding year, under the head of Abkaree, was Rs. 1,40,491-14-10, whilst during the year under review, it amounted to Rs. 1,33,079-15-6, showing a decrease of Rs. 7,411-15-4. This decrease was chiefly due to a less consumption of liquor, owing to the enhanced prices of the actual necessaries of life, and partially to the diminution in the supply of liquor at the time, in consequence of the majority of employés at the distillery being prostrated with fever.

Abkaree.

24. It has been decided for some time past, that the Sudder Distillery system should be introduced into this province; but, owing to the delay entailed by the various requisite references to the Government of India on the subject, the system has not been introduced. The final orders of Government have, however, been lately received, and I have made arrangements for the introduction of the system from the 10th proximo, the details and result of which will be reviewed in next year's Report.

Sudder Distillery.

25. The several items, classed under the head of extra revenue, as contrasted with the year preceding, will be seen by the subjoined table :—

Items of Extra Revenue.

No.	Items.	1864-65.	1865-66.	Increase.	Decrease.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1	Forests ...	1,02,218 10 4	75,456 5 0	.....	26,762 5 4
2	Abkaree ...	1,40,491 14 10	1,33,079 15 6	.....	7,411 15 4
3	Income tax ...	6,866 10 0	3,243 12 0	.....	3,622 14 0
4	Stamps ...	17,262 8 3	21,141 9 0	3,879 0 9	.....
5	Mohaturpha ...	6,466 13 5	7,073 1 1	606 3 8	.....
6	Fines ...	2,907 0 7	3,853 14 2	946 13 7	.....
7	Unclaimed property	298 0 5	645 2 0	347 1 7	.....
8	Local Fund ...	.....	.....	.....	.....
9	Miscellaneous ...	2,970 12 9	6,685 15 7	3,715 2 10	.....
	Total ...	2,79,482 6 7	2,43,167 10 4	9,494 6 5	45,809 2 8
				Deduct Increase ...	9,494 6 5
				Net Decrease ...	36,314 12 3

26. The decrease under the head of Forests, was due to a far less quantity of Sandal-wood and Timber having been sold this year, and to the transfer of Cardamom jungles, now paying the acreage, to the head of land levenue. The decrease under the head of Abkaree, has already been accounted for.

Decrease explained.

27. The increase under the head of Stamps, being 22·4 per cent., over the amount of the preceding year is satisfactory.

Stamps.

28. The other items do not call for any particular remark, except that of Miscellaneous, the increase of which is shown by the subjoined table—

Other items.

No.	Items.	Amount.
		Rs. A. P.
1	Public Works receipts	2,290 2 0
2	Market fees	1,377 1 9
3	Unclaimed property	645 2 0
4	Registration fees	416 0 0
5	Savings from Public Salaries	408 4 5
6	Ferry Contracts	342 2 8
7	Waste land brought under cultivation	222 10 6
8	Confiscated property	169 0 0
9	Sundries	815 8 3
	Total ...	6,685 15 7

29. The duty levied on sundry articles at the weekly marts, amounted to Rs. 1,377-1-9, against Rs. 1,205-7-11 of 1864-65.

Octroi.

30. The Ferries in Coorg are annually put up to auction, and realized Rs. 342-12-8, against Rs. 124-7-0 of the year previous. I am engaged in endeavouring to get local capitalists to construct bridges, and propose to secure to them the right of toll, till the expenditure incurred in constructing them shall have been met.

Ferries.

31. No revenue is derived from salt, which is imported from the Western Coast for local use, and in large quantities for use in Mysore.

Salt.

32. This cultivation has been strictly prohibited, and the attention of the Assistant Conservator of Forests has been drawn to the necessity of watching those tracts, in which it has hitherto prevailed.

Coomry cultivation.

Part III.—Local Fund.

33. The amount under this head is very limited. The collections, during the year under review, amounted to Rs. 11,590-9-8, and were comprised under the following heads :—

Local Fund.

	Rs. A. P.
1.—One per cent. Income Tax	7,782 12 2
2.—Pound Fund	3,242 13 6
3.—Municipal Fund	565 0 0
Total ...	11,590 9 8
showing an increase over the past year of...	1,590 9 8

I propose shortly, to submit a separate report, regarding the necessity of establishing a permanent Local Fund, as well as the classification of the items under that head.

34. No regular Municipal funds exist as yet in this province; but I have succeeded in inducing the inhabitants of Mahadeopett, the Pettah of Mercara, and of Veerajendrapett, to consent to being taxed for the purpose of carrying out measures calculated to ensure a better sanitary condition, and to carry out works of internal improvement.

Municipal.

PART IV.—MISCELLANEOUS.

35. The Coffee blossom promised abundant crops, but only an average crop was realized in most places. There were, throughout the year, 147 rainy days. There was no rain from the 20th November 1865 to the 7th April 1866, and the great drought was severely felt by planters and ryots.

The Season.

36. The generally prosperous condition of the agricultural classes may be gathered from the fact that no Tuccávee advances were made during the year to indigent ryots. No such advances have been made since 1849.

Tuccávee.

37. The rain-fall of the year previous was 143 inches 59 cents, whilst that of the year under review amounted to 149·06, of which 64·82 inches fell during the month of July; the immense fall of 53·84 inches having fallen during the first 12 days of that month. The heaviest rain-fall during the 24 hours occurred on the 1st July, and amounted to 7·44 inches. This increase in the rain-fall would tend to support the views expressed by me last year, that the denudation of forests in Coorg would not affect the actual rain-fall, as the vicinity of the mountains of Coorg, to the Western Coast, would always cause them to receive the full force of the storm-clouds, which dash up against them. I also alluded to my apprehensions that the clearing of the forest would lead to a less retention of the water, and thereby cause sudden floods down the river Cauvery and other streams. These apprehensions have been fully realized in Coorg itself, as shown by Major Sankey, in his able report on the state of works in Coorg. Small bridges have been carried away, and land-slips have happened to some of the roads. I have also found that the fields of rice, which were situated at the top of the paddy flats, and were used as rice nurseries, are now so apt to be flooded, that fresh nurseries have to be formed elsewhere.

Rain-fall.

38. The rain-fall was distributed over the several months of the year as follows :—

Rain-fall per mensem.

MONTHS.	YEARS.	INCHES.	CENTS.
May	1865	9	33
June	,,	22	17
July	,,	64	82
August	,,	36	91
September	,,	9	80
October	,,	2	84
November	,,	2	28
December	,,		
January	1866		
February	,,	...	
March	,,	...	
April	,,	1	63
TOTAL ..	...	149	06

General Remarks.

39. The future agricultural prospects of the province may be considered as encouraging. The annual spring-falls of rain have been late; but, owing to the thick fogs, and clouds of dense moisture, driven up from the sea at this season of the year, the Coffee blossoms have not in some places suffered. The estates down the Sumpajee, or Mangalore ghaut, have blossomed abundantly, and give every hope of promise for the future. In other localities, where these fogs do not prevail, the extreme drought has been much felt, and some estates have suffered so much that one-fourth of the anticipated crops will only be realized. The lateness of the rain-fall has somewhat retarded the other various operations of agriculture, but not to such an extent as to engender distrust for the future.

Future prospects.

40. The Report promised by me last year on the important subject of the sub-letting of the jumma lands of Coorg, was duly submitted, and the Governor General in Council was pleased to accord his sanction, in accordance with the recommendation of the Commissioner, to one-fourth of the family holding of each ryot being sub-let. This subject is of far more importance than it would at first sight appear. It was anticipated that permission to sub-let the jumma holdings of Coorg, would inevitably lead to the poorer classes being gradually bought up, and to a powerful body of zemindars, or landed proprietors, springing up. Such a class, however, amongst such a race, would prove, I believe, a source alike of strength to the Government, and of prosperity to the country. None can possess the rights and privileges of jumma ryots, except those who had obtained the requisite sunnuds from the former rulers of the country, so that there is no fear of any stranger from Mysore, or elsewhere, gradually becoming possessed of such lands, and ousting the hereditary occupants of the soil.

Sub-letting of Jumma lands.

41. The sanction of the Government of India was received in October 1865, and the time has too far advanced to enable me to ascertain the number of butties sub-let, without delaying the despatch of this Report. I hope to be in a position next year, to report on what condition and terms these lands have been so sub-let. The Superintendent used to sanction such sub-leases for a few years, principally, when the head of a house died, and the remaining members of the family were young and unable to cultivate themselves.

Extent sub-let.

Section III.—Education.

42. The present Principal of the Government Central School, the Rev. G. Richter, entered on his duties as Head Master exactly 10 years ago, and the progress of education in Coorg, within that comparatively short period, must be considered highly satisfactory, when we learn that, when Mr. Richter commenced his zealous operations in the cause of education, the chief officials and headmen of the Coorgs were so opposed to any attempt being made to educate their youth, that only one Coorg boy

Central School.

was courageous enough to brave their displeasure and attend the school. This boy was Coloovunda Cariapah, whose rapid rise in the Government service has been chiefly due to his early education, and has proved a great stimulus to the exertions of others. When the Revenue Survey Department took the field in Coorg, he was appointed a Surveyor, and, by his intimate knowledge of the country and of the people, proved a valuable acquisition to that Department. He has since been appointed Soubadar of the Mercara Talook. Now the scene is changed: instead of opposition, we have the cordial co-operation of the chiefs and of the whole race of Coorgs. They have aided largely in building the Central School, and eagerly send their sons to be instructed. The Nad or village school-houses are entirely built and kept in repair by themselves. This most gratifying change is mainly due to the judicious and careful manner, in which Mr. Richter has devoted himself to the task of building up an educational system in Coorg.

European Assistant.

43. The school has been most fortunate in securing the services of Mr. A. Graeter, who was specially engaged in Switzerland, and joined the school in May last year. He is most zealous and assiduous in the performance of his duties, and his mode of imparting knowledge is peculiarly effective and perfect. His great knowledge of the art of drawing will also be of great use.

Number of Scholars.

44. The number of scholars has again risen from 130, during the previous year, to 161; whilst in 1864, the attendance was only 114. These pupils were composed of the following races:—

RACES.	In 1864-65.	In 1865-66.
Coorgs	81	91
Mahomedans	4	34
Hindoos	35	31
Christians	10	5
TOTAL ...	130	161

Hindoostani School.

45. The Hindoostani School was incorporated last year with the Central School, and the number of pupils has increased from 14 to 34, showing that its connection with the Government School is appreciated by the people.

New buildings for Central School.

46. The Principal's quarters have been completed, and are now occupied by him and his European Assistant. The Boarding-house is still occupied as the school house; as, owing to the enhancement of the value of materials and of labor, the original estimate was exceeded. The Government have, however, sanctioned an additional grant of Rs. 3,000, which, I trust, will be found in the forthcoming Budget. This sum, in addition to the value to be realized by the sale of the building, lately vacated by the school, will enable us to complete the school house, and open the boarding-house for its legitimate purpose of receiving the lads from the distant Nads.

47. Another most gratifying sign of the awakened desire for education amongst the people of this province, is evidenced by the fact that provision has been made in the plans, which were drawn up in communication with the headmen, for a girls' boarding school, to be under the supervision of Mr. Richter. In several of the Nad schools, girls also attend.

Girls' Schools.

48. Gymnastics are daily practised, and by adding strength to the body, have, no doubt, imparted vigour to the mind.

Gymnastics.

49. The system of making excursions with the higher classes to different parts of this picturesque province has been introduced. Mr. Richter's graphic description of one of these excursions, with 20 Coorg lads, mostly mounted on Pegu ponies, to the Nacknad Palace, and thence of the ascent of Tadiandamol, the highest peak in Coorg, is most interesting and pleasing. The fact of these lads having amused themselves by rolling down from the summit, huge stones on the imaginary heads of an advancing body of Moplahs from the Western Coast, would tend to shew the innate spirit of this gallant race.

Excursions.

50. It is well worthy of remark that these pupils have much appreciated singing, and the collective choir is well worth listening to: upwards of 50 songs and hymns, in English and Canarese, have been practised and learnt by heart during the past year. As observed by Mr. Richter, in his most pleasing and instructive report, "these songs have already found their "way into the homes of the boys, and resound in their distant Nads."

Singing.

Four of the more advanced boys are taught to play the harmonium by the Principal.

51. Free hand-drawing is taught by Mr. Graeter in the three upper classes. The maps, illustrative of each lesson of Geography, are also drawn by each pupil. The system of teaching the geography of a country, at the same time that its history is learnt, has been adopted, and tends to impress both better on the mind.

Drawing.

52. The school fees collected during the year, amounted to Rs. 216-9-0, against 185-5-6 of the previous year.

School Fees.

53. The average annual cost to Government of educating each pupil in the District Schools was Rs. 2-8-1, and in the Central School, Rs. 48-13-2.

Cost of Pupils.

54. The number of District Schools has increased by four, and now amounts to 24, and the attendance to 736 boys and about 30 girls. Mr. Richter calculates that there is one child at school out of every 35 Coorgs. I might here mention, that in the school of the village of the youth, who first showed his brother Coorgs the way in the paths of learning, there are upwards of 100 boys. These schools are frequently inspected by Mr. Richter, who also holds the position of Inspector of Schools in Coorg.

District Schools.

55. The educational system is based, as it ought to be, on the Vernacular, and only the higher classes in the Central School are taught English. The language used is Canarese, but the Coorgs use a most peculiar dialect of their own, which is a mere spoken language and has never yet been reduced to writing. Some of the Nad men can speak nothing else. I devoted myself last year in getting up a Grammar of this dialect, partly with hopes of throwing some light on the origin of this peculiar race. I would solicit the aid and countenance of the Government to this undertaking, which has cost me much time and labor.

Educational system.

56. There are 16 private schools in Coorg, with an attendance of 280 pupils, which raises the total number of children under education in Coorg to 1,207. Assuming the total population at 1,18,187 souls, this would give 10·2 children at school out of every 1,000 persons, and one to every 19 families.

Private Schools.

57. The German (Bâsel) Mission School at Anantapoor in Amuthnad of South Coorg, which was established in 1857, had an average attendance of 12 boys and 9 girls, of whom 17 are Christians and 4 Hindoos.

German Mission School.

58. The Catholic Mission Schools at Veerajendrapett, Mercara and Fraserpett had an average attendance of 50, 25, and 20 boys respectively. Owing to the repairs to the chapel at Mercara, and to the death of the Master at Fraserpett, the two latter schools were closed at the end of the year.

Catholic Mission Schools.

59. The Village School Masters have all passed through the Normal Class under Mr. Richter, and their capabilities and personal character are thoroughly known to him.

Village School Masters.

60. During my stay at Fraserpett last year, I discovered a small school which had been founded and endowed by General Fraser, who was the first Commissioner of the province. This school was locally managed and has never yet come under the supervision of the Government. I am not at all satisfied with the working of the school, and purpose submitting proposals for bringing it under the control of the Educational Department.

General Fraser's School.

61. There were no grants-in-aid during the past year.

Grants-in-aid.

62. The total expenditure under the head of Education, during the year under review, amounted Rs. 9,778-8-0 against Rs. 18,160-8-0 in 1864-65.

Expenditure.

63. It was my pleasing duty to bring to the notice of Government last year, that the leading Coorgs had subscribed and got up a Coffee plantation in South Coorg, as an endowment to the Central School, and for the support more especially of the boarding-houses for boys and girls. Twenty acres have been planted and sixty cleared, which will be planted

Educational Plantation.

up this season. Thus, the important lesson, on which is based the very foundation of all future educational progress in India, that they should depend more on themselves and less on the Government, has been learnt and already acted on by this remarkable people.

Section IV.—PUBLIC WORKS.

[al paragraphs have been expunged from this Section, as the subjects have been fully iscussed by the Officiating Chief Engineer in his Report, *vide* appendix No. 3.]

Part I.—Original Works.

Military.

64. No expenditure took place under this head during the period under review. An estimate, amounting to Rs. 1,250, for finishing and putting up the gates to the new entrance into the Fort of Mercara, was submitted; but this necessary work has not been carried out.

Civil Buildings.

65. Rupees 2,370 was disbursed to the Revenue Department for Civil Works, under the following heads:—

	Rs.	A.	P.
1.—Building Yeddanacknad Talook Cutcherry ...	1,000	0	0
2.—8 Lock-ups at 80 Rs. each	640	0	0
3.—Needatha Hobly Cutcherry	200	0	0
4.—Cuttay at Yedawanad	300	0	0
5.—Sathay Carav at Needatha Hobly ...	80	0	0
6.—Cuttay at Hoodekery Nad	150	0	0
Total .	2,370	0	0

The Overseer's Lodge at Veerajendrapett was completed at an outlay of Rs. 450.

Agricultural.

66. In a province like Coorg, where the rain-fall is so great, and the requisite works would prove so expensive, the communications are of the first importance, and no expenditure has been incurred for Agricultural works.

Tala Cauvery road.

67. This road, which leads to the source of the Cauvery, was partially opened out by a Contractor, but the work was suspended for a time to allow of the Executive Engineer going over the trace again. This work is being carried out by the Civil authorities, out of the amount of one per cent. Income Tax allotted to this province. During my late tour, I went over the whole line, and have induced the ryots of each village to undertake the portions within their respective boundaries. This will be done between the time of sowing and reaping, and will ensure the work being better and cheaper done, as the villagers are most emulous in carrying it out. Rs. 1,860 0-0 have been expended on this road as yet, out of which Rs. 1,500-0-0 were disbursed during the year under review.

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PART II.—REPAIRS.

Military.

68. The Military buildings were repaired by the Executive Engineer of Coorg, but the amount was charged to the Military Executive Engineer of the Madras Government at Bangalore.

Bungalows.

69. The bungalow at Moornad has been re-roofed, and the entire flooring is being relaid with asphalte; no better flooring could possibly be found for such a damp climate, and is the most economical in the long run, as the chunam floors do not last long. The bungalows at Mercara, Veerajendrapett and Fraserpett were also repaired and put in good order, as also several Moosáfirkhanas.

GENERAL REMARKS.

70. I would urge on the Government the great importance of this road, more especially in comparison with the one proposed to Wynad. This road connects Coorg with the important Coffee growing district of Munzerabad in Mysore, and opens out an easy way for the supply of grain and labor to Coorg, which Mysore always furnishes. This road, moreover, opens out our principal sandal growing talooks, and would cause higher prices to be realized for our sandalwood. The road to Wynad, on the other hand, besides the general advantages obtained by opening out any road, does not confer any benefit on Coorg. The benefit will be entirely on the side of Wynad, which can give us nothing, but will drain us of our grain and labor. In making these remarks, I do not intend it to be concluded that I do not admit the general importance of such a road, but I would contend that there are many other lines and works of more immediate benefit to this province.

Proposed road from Periapatam to Mangalore.

71. Some of the leading planters have put themselves in communication with me regarding a new road from Mysore to Mangalore, and I believe they will bear half the cost of construction themselves. They propose to run a road from Periapatam to Siddapoor, thence to the 3rd mile from Mercara on the Cannanore road, thereby avoiding the Mercara range of hills, and thence across the valley of the Cauvery to the present Mercara-Mangalore road. This would give them an almost level road, instead of which the traffic has now to come up the Fraserpett ghaut to the Mercara plateau, and then down again.

SECTION V.—POST OFFICE.

H. M.'s Post Office.

72. Her Majesty's Post Office is still located in the building which has so long been condemned as utterly unsuitable. The Government of India have sanctioned the construction of a new Central Jail, and the Committee, appointed for the purpose, has recommended that the buildings, formerly used as the Sapper's workshops, should be added to and adapted as a jail. As soon as this is done, accommodation may be found for the Post Office in the Fort and adjoining the other Public Offices. I would strongly urge on the Government the necessity for a speedy sanction to the requisite funds for the jail.

73. There are only two Post Offices in the province, *viz.*, at Mercara and Veerajendrapett, and the subjoined table will show the operations of the Mercara Office during the past year :—

Mercara Post Office.

Particulars.	Mercara.
	Rs.
1.—Paid Letters	59,806
2.—Unpaid do.	14,874
3.—Paid Newspapers, books, parcels, &c.	13,604
4.—Unpaid do.	609
5.—Franked Letters	10,207
6.—Banghy Parcels	1,075
Total ...	1,00,175

Receipts.

74. The total Receipts amounted to Rs. 2,400-0-0 at Mercara, whilst the cost of establishments amounted to Rs. 876-0-0.

Anchay or Local Post.

75. The local postal lines, in connection with the Anchay, or Mysore Provincial Post, run from Mysore *vid* Fraserpett to Mercara, the capital of Coorg, and thence to the Cusbahs of all talooks. The distance traversed amounts to 126 miles, and the following establishments are maintained :—

Head Quarters.

Mercara.

1 Mutsuddy. 1 Inspector. 1 Duffadar. 2 Letter Peons.
14 Runners from Mercara to Coodlipett.
8 do. do. Fraserpett.
6 do. do. Nacknad.
13 do. do. On minor lines.
14 do. do. Kiggutnad.

Veerajendrapett.

1 Goomastah. 1 Letter Peon.

Fraserpett.

1 Shanbogue. 1 Letter Peon.

Operations.

76. The operations of the Anchay Department will be seen by the subjoined Statement :—

Particulars.	Mercara.	Veerajendrapett.	Fraserpett.	Total.
No. of Service Letters	29,646	3,786	3,384	36,816
Do. Newspapers ...	52	20	0	72
Do. Parcels	26	1	4	31
Franked private letters	4,570	525	514	5,609
Do. Newspapers ...	3	0	2	5
Do. Parcels	10	0	2	12
Paid Letters	40,582	3,207	3,248	47,037
Do. Newspapers	589	47	30	666
Do. Parcels	62	16	13	91
Registered Letters	49	8	7	64
Do. Parcels	5	0	0	5
Express letters, both public and private	20	7	5	32
Letters received from, and sent to, H. M.'s Post Office ...	1,545	0	0	1,545
Total ...	75,657	7,617	7,209	90,483

Receipts. 77. The Receipts during the year cannot be shewn, as no account of the postage on letters was kept.

Expenditure. 78. The following statement will shew the disbursements of the Anchay Department during the year :—

	Rs.	A.	P.
Head Quarters Establishment	3,840	0	0
Veerajendrapett do.	192	0	0
Fraserpett do.	156	0	0
Contingent charges	106	0	0
TOTAL ...	4,288	0	0

Runners. 79. Owing to the great rise in the prices of the necessaries of life, and the high wages obtainable on the Coffee plantations, the runners have petitioned for an increase of pay, which must be granted to maintain the efficiency of the different lines.

SECTION VI.—TELEGRAPH.

Telegraph Office. 80. The Madras Telegraph Department called on the Superintendent of Coorg to allot Public buildings for the office at Mercara, but none suitable were available. It has, however, been lately proposed that the Telegraph and Postal Offices should both be located in the building lately vacated by the Central School. This building would have to be purchased by he Madras Government for the purpose.

Posts. 81. I found last year that the standard posts which had been obtained at a great cost from England, were lying about chiefly in the drains, all along the high roads. The wooden tops had all become rotten. I am glad, however, to be able to state that the remonstrance made has had the desired effect, and that they have all been erected on the main lines through the province.

SECTION VII.—MILITARY.

Regiment at Mercara. 82 The only Military force, located in the province, consists of one regiment, the 15th Madras Native Infantry. The Coorgs, however, hold their lands on a feudal tenure, which would enable the Government to call them out to meet any danger from within or from without.

Sepoys' Lines. 83. The Sepoys' Lines are well situated, but require great attention to be paid to them. The huts are miserable structures of mud walls with thatched roofs. These huts have to be roofed each year and the price of straw is rising annually. This expense falls very heavily on the men. The

existing mud walls would not bear tiled roofs, and I would urge on the Government the necessity of constructing fresh huts, and of terracing off the slopes of the hills, on which the lines are situated.

Sanitary condition.

84. The lines are kept exceedingly clean, and great credit is due to Colonel Gage, and the Officers of his Staff, for the efficient measures adopted to ensure the sanitary condition of the lines.

Sickness and Mortality.

85. The total admissions into hospital during the year amounted to 404, and the number of deaths amounted to 11. This makes the mortuary rate 2·72 per cent. to the admissions into hospital, and 1·54 per cent. to the total strength of the regiment. This regiment was previously stationed at Trichinopoly, which is one of the hottest stations of the Madras Presidency, whilst Mercara is the coldest station for Native troops.

Camps.

86. In accordance with the recent instructions of Government, encamping sites have been marked off at the several stages in the high roads passing through Coorg, and a site for a cholera camp, in the vicinity of Mercara, has been selected and made over to the Military authorities: the land or grazing lands of a jumma ryot had to be taken for the purpose, but land in lieu has been allotted to him.

Section VIII.—POLITICAL.

Loyalty of Coorgs.

87. No change has taken place in the political state of Coorg. The Coorgs manifest a cheerful allegiance to the British Government, and we may continue to rely upon their fidelity as long as our conduct towards them is marked with justice, prudence, and kindness. I ventured last year to strongly deprecate any change in the Police system of Coorg, and a greater knowledge of the institutions of the country, and of the dispositions of this peculiar race, has confirmed me in the opinion that no force could so well discharge the duties of Police, in such a mountainous country, as the feudal peasantry of Coorg. I have already pointed out that any other system would be distasteful to the people, and a fatal blow at the nationality of the Coorgs—a nationality which I consider of great importance to foster and preserve intact.

Chenna Bussapah.

88. Chenna Bussapah, whose wife Davammajee, the daughter of Linga Rajendra Wodier, proved the Helen of Coorg by her precipitate flight, to escape the atrocities of the last Rajah of Coorg, still continues to reside peacefully with his aged wife at his country residence. These fugitives were overtaken by the late Rajah's troops near the frontier, and Chenna Bussapah had hardly time to snatch up his wife and child and continue his flight on horse back. The child, however, fell off and was barbarously murdered. This aged couple evince a lively gratitude for the protection afforded them, and lead a quiet retired life.

Widow of Tippoo Sultan.

89. When the Troops of Tippoo Sultan over-ran the province of Coorg, that Sovereign considered that a marriage into the Royal Family of Coorg would tend to confirm his right and title to the province, and

selected Neelammajee, the daughter of Mulliah Arasoo, to be one of his wives. She became a convert to the Mahomedan faith and remained with him for 10 years.

On our assumption of the sovereignty of this country, she was permitted to reside in the palace of Nacknad, and a regular establishment was maintained there for her. This aged princess died at the palace on the 2nd September 1865, at the good old age of 91 years.

The Coorgs.

90. The Executive Engineer of Coorg, in commenting on the Coorgs, who have lately been employed under him, has stated that they are unfitted for the laborious duties of his Department. To this assertion, I must take objection. There is no doubt that those who reside in the healthiest and more elevated parts of the province have an objection to serving in South Coorg, and suffer from fever there, equally with Europeans and strangers, but those whose homes and farms are in those localities, are ever anxious to serve in them, and the remedy is to select men who are acclimatized. It must, however, be admitted that this gallant little race of warriors have been treated with much consideration, but only with the consideration due to their peculiar characteristics of simplicity and general honesty, and of their distinguished loyalty and fidelity to the British Crown. Such consideration may have led to misapprehension and over-weening confidence on the part of some, but I consider that, with judgment and tact, the lesson can daily be taught to them that the continuance of such consideration depends on their own conduct and behaviour.

Section IX.—FINANCES.

Finances.

91. The tide of Financial results, ever ebbing and ever flowing, may now be considered to have set in for a permanent increase over the revenues of the past, by the influx of that source of revenue, which British enterprise and capital have caused to arise in this province.

Vast tracts of land, which were formerly covered with dense primeval forest, are now planted out with the ever-verdant Coffee plant, which causes the hill sides at one time to glisten like flakes of snow with its blossom, and at another to shew the deep tint of autumn with its brownberry. These lands formerly paid no tax, and this is the first year that the revenue to be derived from Coffee estates is shown under its proper head of Land Revenue. 14,126·75½ acres of land, bearing an assessment of 1 Rupee per acre, and 3,712·81¼ acres of 2 Rupees per acre, have been brought to book this year.

Cardamom plots brought under acreage.

92. Many jungles, in which cardamom cultivation used to be carried on, have been felled and converted into Coffee holdings. These jungles, in accordance with the rules in force, continued to pay the cardamom rent up to different periods, but 2,297·57 acres have come under the acreage assessment this year. I may here mention, to show how the cultivation of Coffee has led to a permanent increase over the revenues of the past, that one jungle which yielded Rs. 44-4-0 as cardamom rent, now pays no less than Rs. 420-0-0 as Coffee tax, and in three years will pay Rs. 840-0-0. This is only a mere approximate area, but when surveyed, the extent will probably be double.

93. The total demand for the year, including a balance of Rs. 66,010-11-1 of the year previous, amounted to Rs. 5,13,983-3-0, out of which Rs. 4,57,966-11-1 were actually recovered during the year, and a balance of Rs. 56,016-7-11, remained at the close of the year. This balance was chiefly due to the late period of the year, when demands were made on the planters for the new acreage assessment, and to cardamom tax not having been paid up by them, owing to misapprehension of the rules in force; but I have caused Rs. 31,956-1-6 out of this balance to be recovered by the 20th instant, and a balance of Rs. 24,060-6-5 only really remains of the year.

Demand, Receipts, and Balance.

94. The outstanding balance, shown in last year's report, was Rupees 62,951-1-8. The increase of balance, Rupees 3,059-9-5, now shown, was due to subsequent enquiries having shown that some of the Coffee estates had come under the acreage assessment during the year 1864-65, and to difference between the hálut and original cardamom rent.

Balance of last year.

95. The actual receipts, under the several heads of Revenue, as compared with those of the year previous, will be shown by the subjoined table.

Receipts.

No.	Heads.	1864-65.			1865-66			Increase			Decrease.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P	Rs.	A.	P.
1	Land Revenue	1,67,804	12	4	1,69,350	1	2	1,545	4	10	....		
2	Coffee Tax ...	15,056	7	1	14,049	3	0	. . .			1,007	4	4
3	Abkaree .	1,42,510	10	10	1,34,544	7	9				7,966	3	1
4	Stamps ...	17,262	8	3	21,186	8	0	3,923	15	9	... ..		
5	Income tax ..	6 866	10	0	4,243	12	0	.. .			2,622	14	0
6	Excise ...	... .			.....			... ..			... ..		
7	Postal	.. ...			.....			... .			.. ...		
8	Miscellaneous	1,02,594	2	4	88,151	14	2	... .			14,442	4	2
	Total Ordinary	4,52,095	3	1	4,21,525	14	1	5,469	4	7	26,038	9	7
	Extraordinary	16,728	13	9	34,175	0	8	17,446	2	11	.....		
	Grand Total	1,68,824	0	10	4,55,700	14	9	22,915	7	6	26,038	9	7
								Net Decrease...			3,123	2	1

96. The total income of the year, inclusive of the arrears of past years, amounted to Rs. 5,13,983-3-0, against Rs. 4,68,824-0-10 of the year previous, or an increase of Rs. 45,159-2-2. Exclusive of the arrears of the past, the actual income was Rs. 4,47,972-7-11, against Rs 4,65,306-10-7 of 1864-65, or a decrease of Rs. 17,334-2-8. The expenditure under the general heads, as contrasted with that of the preceding year, was as follows :—

Total income and expenditure.

	1864-65			1865-66.		
	Rs.	A.	P.	Rs.	A.	P.
1.—Civil Charges ...	2,08,846	15	2	2,07,103	2	5
2.—Public Works ...	92,595	0	4	1,06,000	0	0
3.—Military	1,50,000	0	0	1,44,822	10	9
Total ...	4,51,441	15	6	4,57,925	13	2

97. The increase under the head of Miscellaneous is due to the following items :—

Terms of increase.

		Rs.	A.	P.
	Ordinary.			
1—Land Revenue		1,545	4	10
2—Stamps		3,923	15	9
	Extraordinary.			
Public Works, Miscellaneous Receipts, &c. ...		7,446	2	11
TOTAL ...		12,915	7	6

98. The ordinary expenditure of the year under review amounted to Rs. 2,07,103-2-5, and the surplus to Rs. 2,40,869-5-6; which, contrasted with the year 1864-65, shows a small decrease of Rs. 1,743-12-9 in expenditure, principally owing to the decrease under the head of Education.

Ordinary expenditure.

99. The particulars of expenditure, under the principal heads, will be shown by the subjoined table :—

Particulars of expenditure.

No	PARTICULARS.	1864-65.			1865 66.			INCREASE.			DECREASE		
	Ordinary.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A	P.	Rs.	A	P.
1	Revenue .	77,672	4	1	82,590	5	3	4,918	1	2	... ..		
2	Abkaree ...	43,937	11	0	39,480	7	5	.. ...			4,457	3	7
3	Stamps	831	0	5	1,010	15	9	179	15	4	.....		
4	Excise ...	... ..			.....			... ..			... ..		
5	Postal	4,188	0	0	4,188	0	0	.....			.....		
6	General charges .	3,432	0	0	3,432	0	0	... ..			.....		
7	Judicial ...	12,827	9	0	13,826	14	3	999	5	3			
8	Medical ..	2,471	9	10	2,464	8	0	.....			7	1	10
9	Pension .	12,771	5	11	12,718	2	5	.....			53	3	6
10	Education ...	18,160	8	0	9,778	8	0	.....			8,382	0	0
11	Religious and endowments of temples, &c. .	13,890	3	10	13,890	3	10	.....			.....		
12	Ecclesiastical ...	2,876	8	0	1,783	8	0	.....			1,093	0	0
13	Miscellaneous ...	15,788	3	1	21,939	9	6	6,151	6	5	.....		
	TOTAL ...	2,08,846	15	2	2,07,103	2	5	12,218	12	2	13,992	8	11
	Extraordinary.												
	Public Works ...	92,595	0	4	1,06,000	0	0	13,404	15	8	.....		
	GRAND TOTAL ..	3,01,441	15	6	3,13,103	2	5	25,623	11	10	13,992	8	11

The increase of expenditure under the head of Revenue was due on account of the excess of charges incurred in consequence of the late Superintendent's absence on leave for 6 months, and also to the increase of pay sanctioned to the peons of the establishment, and the decrease under that of Abkaree to less liquor having been manufactured. This amount of saving would tend to lessen the loss in receipts shown under Abkaree.

Increase and Decrease explained.

Judicial. The increase, shown under the head of Judicial, arises in consequence of the appointment of a District Registrar, &c., for Coorg, as well as the increase of pay to the Mooktassor of the Durryaft Cutcherry of the Judicial Department.

Education. The decrease under Education is due to the large amount disbursed during the previous year for the construction of the new school buildings at Mercara.

Ecclesiastical. The decrease under Ecclesiastical was owing to the sum of Rs. 1,000 having been paid the previous year as a grant-in-aid to the Mission Chapel at Anundapoor.

Miscellaneous. The increase of expenditure under Miscellaneous was due on account of working charges incurred by the Forest Department this year, as well as the purchase of furniture, crockery, &c., for the Travellers' Bungalows in Coorg.

Balance of the year previous. 100. The Balances of 1864-65, remaining unrecovered, were comparatively large, and amounted to Rs. 66,010-11-1; out of this sum, Rs. 57,930-9-5 have been recovered and adjusted during the year, leaving an actual balance of Rs. 8,080-1-8, out of which Rs. 6,022-5-6 were recovered up to the 20th instant. The balance is due under Coffee and Cardamom and will be shortly recovered.

Balance of the year. 101. The outstanding balance, unrecovered at the close of the year under review, exclusive of that of previous years, amounted to Rs. 47,936-6-3, and were composed of the following items:—

No.	Items	Amount of Balances.	Since recovered up to 20th May 1866
		Rs. A. P.	Rs. A. P.
1	Land Revenue	3,160 11 3	2,859 6 7
2	Assessment of Coffee land	16,301 10 9	1,372 7 10
3	Abkaree	10,474 1 9	10,474 1 9
4	Mohaturpha	8 13 3	0 4 10
5	Sandal-wood	732 2 11	732 2 11
6	Cardamom	7,809 14 7	1,762 15 3
7	Sundries	755 1 8	38 6 9
8	Sale of waste land	8,693 14 1	8,693 14 11
	Total ...	47,936 6 3	25,933 12 0

Out of this sum, however, Rs. 25,933-12-0 were recovered by the 20th instant, leaving a balance of Rs. 22,002-10-3, which is chiefly due by planters and holders of cardamom jungles. The introduction of the acreage assessment caused a great addition of work, both in the English and Vernacular Departments, which could not be met by the present under-handed Departments, and the amounts due by the several planters could not be ascertained in time to recover the amount within the year. I am engaged in making out complete registers of estates, and will then be able to duly intimate to each planter the several sums annually due, and to fix a date for payment, so that no such outstanding balances may be again shown.

Irrecoverable balance.

102. Owing to the bees' wax contractor having become bankrupt, a sum of Rs. 1,035-1-4 was written off the books of this province, as per proceedings of the Government of India, No. 3048 of 23rd October 1865.

Increase of Land Revenue under Coffee.

103. The realizations under Coffee have been this year Rs. 21,552-7-2, which swells the land revenue this year to Rs. 1,92,742-14-6.

Cash Balance.

104. The cash balance, on the 30th April 1866, amounted to Rs. 3,50314-0-7, against Rs. 3,05,368-15-4 of the year previous.

Necessity for increase in Establishment.

105. The necessity for an increase of the Civil Establishments of Coorg has been repeatedly urged by my predecessors. The great influx of European settlers would alone be a sufficient cause for adding to the strength of establishments.

Increase in work.

106. The increase of actual work in the several branches of the administration will, however, plainly shew the necessity for such an increase. The large addition to the Judicial work of the province has already been dwelt upon in a separate report, and I need only state here that the number of reports, &c., disposed of under the general head of Revenue, amounted to 63,813, against 42,755 of the previous year. The total receipts and disbursements in the Treasury Department amounted respectively, to Rs. 6,24,869-9-10, and Rs. 5,79,929-5-1, against Rs. 7,23,375-4-7, and Rs. 7,64,987-11-11 of 1864-65.

Coorg contributes towards general Government of India.

107. It has thus been shown that, deducting a proportion of the expenditure under Military and Public Works, Coorg contributes Rs. 1,12,056-5-6 or 31·71 per cent. of its income towards the general government of India.

Section X.—MISCELLANEOUS.

Population.

Population.

108. No regular census has ever been taken in this province, and the following computations must only be considered as approximately correct. The total population, according to the Khani-shoomar accounts, stood at 1,18,187 souls, against 1,19,118 during the year previous. This number was distributed as follows amongst the several races in Coorg :—

No.	Races.	1864-65.	1865-66.
1	Coorgs	25,534	24,821
2	Hindoos	93,584	93,366
3	Mahomedans		
4	Christians		
	Total ...	1,19,118	1,18,187

109. The sanitary condition of the province may be considered on the whole to have been good. The total number of deaths amounted to 4,079, against 3,774 of the year previous. The deaths amounted to 34 in every 1,000 of the population, and were chiefly due to fever. There were no epidemics.

Sanitary condition.

110. The deaths amongst cattle amounted to 12,073.

Cattle.

111. The Amma Coorgs are the ancient sacerdotal race of Coorgs; but, according to an old legend, they have come under the ban of the Goddess Cauvery, who is said to have cursed them, and to have decreed that the race should gradually become extinct. It is a noticeable fact, that the race is gradually dying out. I have not been able to trace out any physical or other causes for such a deterioration.

Amma Coorgs.

112. The births, during the period under review, amounted to 4,102, against 4,088 in the year previous, and the deaths to 4,079 against 3,774.

Births and Deaths.

113. The percentage of births to population was 3·47, and of deaths 3·45 per cent.

Percentage to Population.

114. The regular system of registration of deaths, alluded to by me last year, was extended to the principal Pettahs in Coorg, and the following results have been obtained:—

Registration of deaths.

No.	Pettahs.	Males.	Females.	Total.	Percentage to Population
1	Mercara	73	34	107	2·41
2	Veerajendrapett	58	49	107	3·82
3	Fraserpett	33	50	83	6·88
4	Somavarpett	13	16	29	3·08
5	Codlepett	20	11	31	4·53
6	Sunnevarasuntay	8	10	18	3·54
	Total ...	205	170	375	3·65

Agriculture.

115. In former days Rice was the staple product of Coorg; but now Coffee is taking its place. Until the Survey Department completes its operations, the actual number of acres taken up for Coffee cultivation cannot be given. The number of acres under taxation this year amounts to 17,839·59¾; and 16,523·13¼ acres are supposed to be the approximate quantity of estates under cultivation, but not yet surveyed, and 27,261·96½ acres more have been surveyed, but are not under assessment yet; and there were 1,068·51 acre snewly taken up during the year under review. This gives a total of 62,693 acres of land under Coffee cultivation, but I believe the survey will shew it to be upwards of 1,00,000, which in a few years will give Rs. 2,00,000, or far more than the whole of the present land revenue.

Coffee.

116. The cultivation of tea plants is being gradually extended, and promises to be most successful. It is being introduced into all the principal plantations.

Tea.

117. The planting of Cinchona is also extending. The President of the Planters' Association, Mr. H. Mann, has been most successful in the propagation of plants, and has succeeded in rearing thousands of shoots. Seventeen of the trees in the Government experimental garden died during the year. No extension or propagation has taken place, but proposals will be shortly submitted by me for the erection of a hot-house, and for adopting measures for the propagation of plants to such an extent, as to ensure a supply to all the Nads of Coorg, and to make the garden self-supporting. Some of the bark was sent by me for analysis to Mr. McIvor, the Superintendent of the Government plantations on the Nílgírí hills, who reported that, though the wood was not in a healthy condition, owing to its excess of moisture, the quality of the bark was nearly equal to that produced on the Nílgírí hills, and that the yield of alkaloia was about $3\frac{1}{4}$ per cent.

Cinchona.

118. The growth of two lines of trees was given by me last year. The growth since will be seen by the subjoined table :—

Growth of Cinchona.

	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In	Ft.	In	Ft.	In	Ft.	In.	Ft.	In.
1864-65.	...		5	5	4	2	4	6	5	$3\frac{1}{2}$	4	3	4	3	7	0	5	8
					Blossomed.													
1865-66.	...		8	2	6	1	Dead		7	10	1	0	6	6	10	6	8	7
											Replanted.							

	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In	Ft.	In.
1864-65.	5	$8\frac{1}{2}$	4	7	5	6	5	0	2	9	1	$4\frac{1}{2}$	5	6	5	6	5	3
	Dead.						Dead.				Blossomed.							
1865-66.	0		5	9	7	10	0		4	6	6	8	8	5	7	11	8	3

119. The subjoined table exhibits the area of land under cultivation, as contrasted with the year previous :—

Area of land under cultivation.

No.	Tenures.	1864-65					1865-66.				
		No of Buttes.	No of Cundaras.	Moodies.	Thoondoos	No of Trees.	No of Buttes	No of Cundaras	Moodies.	Thoondoos	No of Trees
1	Wet .	18,83,500½	3,063¼	771		...	18,96,870½	$3067\frac{29}{40}$	$772\frac{3}{8}$	...	... .
2	Dry ...				$5,396\frac{10}{16}$					$5,834\frac{1}{4}$	
3	Gardens .	. .			...	26,553	... .	. .	.	.	26,558

120. Cotton cultivation is carried on to a limited extent in the low Eastern talooks. Captain R. N. Taylor, the late Superintendent of Coorg, has succeeded in obtaining very fine cotton from Egyptian seed in forest land at the foot of the Western Ghauts. The Bombay Chamber of Commerce pronounced it to be the best that had reached the Bombay market. I believe, however, it had been irrigated.

Cotton.

121. The season was, on the whole, very favorable. The paddy crops were abundant, and the Coffee yielded a fair average crop, and more abundant than the year previous.

Season and crops.

Forests.

122. The year under review was the first of the operations of the Forest Conservancy Department. The Assistant Conservator has visited and inspected the greater portion of the valuable timber forests of Coorg, and made himself acquainted with their character and capabilities. In a country like Coorg, it was essentially necessary that the Assistant Conservator of Forests should be placed under the immediate control of the Superintendent, and not of the distant Conservator of Forests at Mysore. This has been done and is attended with the best results. The Superintendent has been able to supervise the working of the forests, which in a country like Coorg constitutes half of his ordinary revenue work, and to dispose of all questions relative to them, without the delay of constant references. The Assistant Conservator inspected 12 forests, which had been applied for for Coffee cultivation, out of which 10 were granted on his recommendation, and two were refused.

Conservancy Department.

123. The most valuable teak forests are to be found in the south and East of Coorg. They also contain blackwood, honé *(peterocarpus marsupium)*, muttie, *(terminalia coriacea)* dindaga, &c., and can be easily worked, the land being flat. It is proposed to reserve them as Royal forests. The forests to the north contain much valuable trees of the same description except teak, the larger trees of which had all been cut away by the Madras Sappers and Miners when they were stationed at Mercara; much stunted teak, however, is to be found. The Assistant Conservator proposes to reserve these as second class forests for working by his Department. In the forests to the west, which are almost inaccessible, the timber is comparatively poor; but the vast range of Cardamom jungles abound in the poon, which is so valuable for spars, the iroopoo and irrel. These forests will become more valuable as Coorg is opened out.

Forests.

124. There were 276 teak trees felled in South Coorg during the year by the Department, which yielded 509 logs. These operations are carried on by a wild forest tribe called Koorumbars. They object to be tied down to monthly salaries, and it is proposed in future to pay them by the cubic foot. The total cost for felling, trimming, and removing to depôt was Rs. 1,536-14-4 or Rs. 3-0-1 per log.

Felling.

125. Only one timber depôt has been found as yet. This is at Moorcull, in South Coorg, about 20 miles from Hoonsoor in the Province of Mysore, to which there is a fair handy road, another will be established about 3 miles from Tittimutty on the high road to Hoonsoor.

Depôts.

126. Rupees 4,382 were realized by the sale of 489 logs of teak, which gave Rs. 8-15-4 per log. This rate was low but higher than that obtained last year. The total sum realized, inclusive of sale of branch pieces, picked logs for the Department of Public Works, &c., amounted to Rs. 5,255-8-0.

Sale of Teak.

127. The Departmental arrangements for the collection of sandalwood utterly failed, owing to the default of the contractor, and the Assistant Conservator had to revert to the old system, and call on the aid of the local

Sandal.

authorities. This was chiefly due to the rate being too low, and the contractor a stranger to the localities in which sandal is to be found. The rates were Rs. 6-8-0 per candy for billets, and Rs. 4-8-0 for roots. There were 463 candies of billets alone collected; and 401 candies were sold for Rs. 30,241-9-2, leaving 61 candies in stock, valued at Rs. 4,340-0-0. Rs. 571-14-4 were also realized by the sale of surplus sandal found in the different Koties.

128. The system of selling timber on licenses was introduced this year: thirty-six licenses were issued, and Rs. 1,122-12-6 realized thereon. The Assistant Conservator remarks that at first licenses could only be obtained through the Superintendent, which led to great delay and consequent dissatisfaction on the part of purchasers, and that, on his recommendation, the Soubadars of Talooks have been allowed to issue licenses for 15 trees and under. This has worked well, and more licenses have been taken out. The real cause of the delay, however, was due to the Assistant Conservator being constantly absent on duty exploring distant jungles, and parties had to trudge about after him, frequently just missing him at successive camps. This entails great hardship on purchasers and must lead to fewer applications; but I see no objection to the Assistant Conservator granting licenses direct himself, whenever purchasers find it convenient to apply to him, wherever he may be, leaving them the option of applying to the Soubadars and other fixed offices.

License System.

129. It is proposed to form a teak nursery in South Coorg, and to plant out a teak plantation near the Lutchman Teerta river, down which the timber might be floated to within 8 miles of the town of Hoonsoor in the Mysore Province. It is also remarkable that in such a country the supply of firewood is becoming scarcer and dearer every year, and the time has already arrived for adopting precautionary measures for the future. The Assistant Conservator has been directed to form a nursery at Mercara and to plant out tracts in the vicinity.

Nurseries and Plantations.

130. I concur with Mr. Dobbs in considering that the proposed addition of a manager and 2 darogahs is absolutely necessary; but I am of opinion that no reduction of peons, to the extent proposed, can be safely ventured on.

Establishments.

131. It is proposed to lease out the elephant pits in South Coorg, which is overrun with these monarchs of the forest.

Elephant Pits.

132. The details of revenue derived from the forests have already been given under the head of Finance. The total amount of revenue from all sources was Rs. 75,456-5-0, against Rs. 1,02,218-10-4 of the year previous. The Assistant Conservator has entered the value of trees on land taken up for Coffee cultivation; but this cannot be depended upon, as in some instances the value of the trees, in addition to the auction price of the land, renders the land so expensive that the purchasers have to resign the grant for Coffee. Moreover, this value is not to be realized till the trees may be felled, and by calculating upon it at once, our outstanding balances would become large and fictitious.

Revenue.

133. The unrecovered balance of the year under review was Rs. 8,739-13-6, out of which Rs. 3,349-7-2 were recovered by the 20th instant, and the balance of Rs. 5,390-6-4 has not been recovered, owing to the delay in making the demand for and recovering the cardamom tax from the planters.

Balance of last year.

134. The outstanding balances of previous years amounted to Rs. 47,807-0-3, out of which Rs. 42,442-9-1 were collected, with the exception of Rs. 1,035-1-11, which were written off as irrecoverable balance, Rupees 44-4-0 were transferred to coffee tax, and Rs. 626-8-0 were remitted on account of certain trees, which had been granted but had not been eventually taken owing to the death of the grantee.

Balance of previous year.

Survey.

135. The Department was re-organized during the year, and Lieutenant Freeth of the Royal Artillery, an Assistant Superintendent in the Madras Revenue Survey Department, was placed in charge of the party in Coorg. The survey was conducted in a most irregular manner previously. The Surveyors used to go and survey whenever they chose, and were carried off by planters in all directions to survey their estates. It is now, however, under Lieutenant Freeth's able management carried on systematically. The Mercara Talook has been commenced, and the survey will in future be conducted regularly, talook by talook, except in the case of fresh blocks of forest lands put up to auction on applications for Coffee cultivation.

Appointment of Lieut. Freeth.

136. The number of Surveyors was increased to five, but at first there was not much progress, owing to some being prostrated with fever, and others being new and inexperienced hands. The draughtsmen were removed altogether, with the view of having the plans plotted at the Central Office at Madras, or by the party here during the monsoon, when no out-door work can be carried on. Three out of the five Surveyors were Coorgs.

Surveyors.

137. The working season commenced towards the end of September last and will not close till about the 15th June, when the monsoon will have set in and put a stop to all work. Up to date 108 estates had been surveyed, but more will be completed before the close of the season. The 108 estates comprised 3,868·19 acres, against 73 estates with an area of 14,323 acres of the year previous. The Horoornoorockul Nád will be entirely completed, and another (Halari) almost so. The estates are being grouped together by villages, and five village circuits will be completed and mapped, shewing the relative position of estates, roads, streams and general features of the country.

Survey of Coffee Estates.

138. The village boundary surveys are somewhat backward, owing to the want at first of a sufficiently qualified Surveyor to undertake large circuits.

Village Boundaries.

139. As it was requisite that demarcation should be well in advance of the survey, Parputtigars were selected in each talook to carry out the demarcation of all estates in their respective talooks, and persons were appointed to act for them in their Nâds, or sub-divisions of a talook. These demarcation Parputtigars were personally instructed by Lieutenant Freeth in their duties, and he reports that they have done very well, and performed their work satisfactorily. The demarcation of estates in the Yelloosaveraseemi Talook has been completed, and the work has been distributed as follows over the several Talooks :—

Demarcation.

	Estates.
1.—Mercara Talook	98
2.—Paddinacknad Talook	102
3.—Yeddanacknad Talook	4
4.—Kiggutnad Talook	90
5.—Nunjarajputten Talook	96
6.—Yelloosaveraseemi Talook	90
TOTAL ...	480

140. There were 90 miles of boundaries actually measured during the year.

Boundaries.

141. The Assistant Superintendent in charge of the survey has been vested with powers under Act XXVIII of 1860, and little or no difficulty is now experienced in getting boundaries cleared. There were only five boundary disputes during the year.

Act XXVIII. of 1860.

142. The total expenditure, on account of the survey during the year under review, amounted to Rs. 15,099-4-6, or Rs. 4-0-5 per acre surveyed, against Rs. 15,475 or Rs. 1-1-3 per acre during the previous year. This increase in cost and decrease in out-turn is due to so many small estates, belonging to Native proprietors, having been done during this season, whilst large estates had been done during the previous season. At the close of the present working season, Lieutenant Freeth and a portion of the Surveyors will be removed to the Nílgírí hills for work there, and the Coorg Surveyors will be put on half pay. The maps will be plotted at Madras during the monsoon. The salaries of the Assistant Superintendent and his Surveyors will thus be saved to this province and cost of survey reduced.

Cost of Survey.

143. At the present rate of progress the survey will not be complete for 10 or 12 years. This delay in survey, and consequently in obtaining title deeds, will prove most grievous to European proprietors of estates, to whom the possession of valid title deeds is of the utmost importance. I would, therefore, propose that one survey party should be employed in surveying the estates of the European planters. These estates are larger than the approximate area, on which they are now assessed, and their early survey would not only tend to an increase in revenue, but would also decrease the cost of survey per acre for the year.

Future operations.

Hospitals, Dispensaries, and Vaccination.

144. The number of applicants for relief at the Civil Dispensary of Mercara increased by 681, and the subjoined table will show the particulars :—

Civil Dispensary.

No.	Description.	Admitted.	Cured.	Died.
1	In-patients	233	204	28
2	Out do.	3,666	3,656	4
	Total ...	3,899	3,860	32

The increase in the number of applications was chiefly due to the removal of the Dispensary from the distant Sappers' Lines to a more central position near the Fort.

145. The total income of the year, including a balance in hand of Rs. 1,145-8-8, amounted to Rs. 3,466-13-3, and the expenditure to Rs. 2,056-6-3.

Realizations.

The details are subjoined :—

Dr.	Rs.	A.	P.		Rs.	A.	P.	*Cr.*
Balance on 1st May 1865.	1,145	8	8	By Medical Officer's salary	360	0	0	
From Government .	1,654	4	11	„ Dressers Ditto	294	0	0	
„ European donations and subscriptions ...	378	8	0	„ Servants' wages ...	390	0	0	
„ Native do. do. ...	140	7	8	„ European medicine from Medical store ...	610	4	11	
„ Sale of medicines to persons not entitled to gratuitous use ...	148	0	0	„ Dieting Sick ...	247	7	6	
				„ Wines & Sprits ...	11	3	3	
				„ Other charges ...	143	6	7	
Total Income ...	3,466	13	3					
Total Expenditure ..	2,056	6	3	Total ...	2,056	6	3	
Balance ...	1,410	7	0					

146. The annual average cost of each patient was Rs. 0-8-5, and the daily cost of each in-door patient was Rs. 0-2-0.

Cost.

147. It has been found very difficult to keep up the vaccination owing to the vaccinators constantly engaging themselves on other matters, and the difficulty of replacing them. There were 623 cases vaccinated, out of which 510 were successful and 113 proved failures. Small-pox has been somewhat prevalent, and I have directed the attention of the Medical Officers to the necessity of putting the Vaccine Department on a better footing.

Vaccination.

148. The season was generally healthy. There were no epidemics during the year, and but few cases of cholera occurred. At the close of the year, however, fever and small-pox began to be prevalent.

Season.

149. In a country like Coorg, where fever is so prevalent at some seasons of the year, a supply of quinine to the distant Nâds would prove invaluable; and it is proposed to try the experiment of sending out quantities of this valuable medicine to the distant villages, to be distributed on payment. This will prove a most legitimate extension of the operations of this valuable institution.

Quinine.

150. Dr. J. P. Nash, of the Madras Medical Department, has been in charge of the Civil Establishments of Coorg during the whole period under review, and is entitled to my best thanks for the zealous and efficient manner in which he has discharged the several duties that have devolved upon him.

Medical Officer.

Registration of Assurances.

151. The provisions of the Indian Registration Act XVI of 1864, were extended to Coorg in June last, by Government Notification, Foreign Department, No. 227 under date the 3rd June 1865, but owing to their not having been properly understood, the results shown up to the close of the year cannot be considered conclusive in any way. A curious question has now arisen under this Act. The Madras Law Officers have given it as their opinion that grants and title deeds issued by Government are not exempted from the operations of the Act, and as not a single grant had been registered within the stipulated period, the validity of the title deeds given might possibly be called in question.

Act XVI of 1864.

152. The Superintendent of Coorg has been appointed ex-officio Registrar of Coorg, and the Soubadars of Talooks as Deputy Registrars.

Registrars.

153. The registrations under the several sections of the Act, and the amount of fees levied thereon, are shown by the subjoined table:—

Registrations and Fees.

Headings.	No. of Bonds	Fees.	Remarks
		Rs. A. P.	
Deeds of sales, absolute transfers and mortgages of landed property, and articles of copartnership, &c, executed after the introduction of the Act and exceeding Rs. 100 in value.	201	444 0 0	
Deeds of the description specified in section XVI.	204	198 0 0	
Deeds executed before the introduction of the Act and presented within one year under Section XVII.	31	122 8 0	
Attestation of Powers of Attorney, special and general, under Section XXVIII.	43	33 0 0	
Total	479	*797 8 0	* Out of this sum, Rs. 19 being the Registration Fee collected on 2 instruments, were refunded in consequence of the Registration having been cancelled.

154. The total cost of Establishments, up to the close of the year, amounted to Rs. 958-13-10, and the total amount of fees realized to Rs. 778-8-0.

Cost of Establishments.

Trade Statistics.

155. No fresh fairs have been established during the year, but the construction of Ponnapett in South Coorg had been proceeded with.

Fairs.

156. An account has been kept during the past year of the quantity of traffic passing up and down the Ghaut roads leading to Mangalore and Cannanore; and the Collector of South Canara has kindly furnished Monthly Returns of the traffic passing through the toll-gate at Sumpajee on the road to Mangalore. The subjoined Statement will show the total amount of the traffic down these ghauts, but I much fear that they cannot be relied on, as the labor of keeping these accounts is thrown on establishments that have other work to perform, and I do not believe that the carts, &c., that so often pass down during the early hours of the morning and during moon-light nights, are duly booked—

Traffic on the Ghât roads.

No.	Particulars.	Perumbody.	Sumpajee.
		Rs.	Rs.
1	Loaded Carts	35,359	8,085
2	Empty Carts	12,538	290
3	Bandies, with horses or bullocks	4,067	179
4	Horses	1,392	569
5	Palanquin or Mancheel with bearers	4	4
6	Bullocks with loads	22,468	17,592
7	Do. without loads	9,740	1,421
8	Men with loads	19,580	11,063
9	Do. without loads	30,900	20,836
10	Cattle	4,965	342
11	Sheep and Goats	672	721
12	Camels	11	10
13	Elephants	7	5
14	Asses	543	275
	Total ...	1,42,246	61,392

157. The following Statement will shew the distribution of the traffic on those roads over the several months of the year :—

Monthly traffic.

Months.	Loaded Carts.	Empty Carts.	Bandies with horses or bullocks	Horses.	Palanquin or Mancheel with bearers	Bullocks with loads.	Bullocks without loads.	Men with loads.	Men without loads.	Cattle.	Sheep and Goats.	Camels.	Elephants.	Asses.	Total.
May 1865 .	2,315	59	442	137	0	1,059	0	2,062	1,498	687	9	2	1	0	8,271
June „ ...	309	113	623	46	0	255	26	1,862	108	247	9	0	0	3	3,601
July „	95	16	883	25	0	163	0	1,954	1,406	70	47	3	2	0	4,673
August „	34	23	1,052	571	1	20	0	1,704	1,564	95	12	0	0	0	5,076
September „ ...	542	0	2	147	2	515	0	1,962	3,960	14	60	4	3	163	7,374
October „ .	1,609	62	30	92	0	519	244	3,400	3,262	120	215	1	0	76	9,630
November „ .	4,001	74	129	41	0	3,571	848	4,365	5,459	127	225	1	0	131	18,972
December „	5,490	764	85	159	1	8,519	842	4,214	9,473	453	97	0	0	77	30,183
January 1866 .	5,572	944	439	160	0	5,704	876	1,818	5,764	619	192	1	0	71	22,190
February „	7,240	3,459	199	295	0	8,251	1,392	3,278	8,915	1,198	132	0	1	174	34,534
March „	9,596	3,704	203	162	3	9,940	4,143	2,819	6,204	887	368	3	2	65	35,099
April „ ...	6,632	3,610	159	126	1	4,544	2,790	1,275	4,123	781	27	6	3	58	24,135
Total ...	43,444	12,828	4,246	1,961	8	40,060	11,161	30,643	51,730	5,307	1,393	21	12	818	2,03,638

Conclusion.

158. It now only remains for me to bring to the notice of the Commissioner those Officers of this province, for whose cordial co-operation in their several Departments, I am so much indebted. Mr. Stoddard, the Executive Engineer, has labored hard, against many difficulties, to maintain the efficiency of the works under his charge. A more zealous and hard working Officer the Government does not possess.

The Executive Engineer.

159. Lieutenant W. Freeth, the Assistant Superintendent of Revenue Survey, has conducted the difficult duties of his Department in such a judicious manner as to win the confidence of the natives, and reconcile the Coorgs to the operations of a Department to which they were at first much opposed.

Assistant Superintendent, Revenue survey.

160. Mr. C. A. Dobbs, the Assistant Conservator of Forests, has labored hard and well. He has not hesitated in performing his duties at all seasons and in all localities, however unhealthy, and has, consequently, suffered much from fever. The same remark is applicable also to Lieutenant Freeth.

Assistant Conservator of Forests.

161. Mr. C. Soobiah, my Native Assistant, has had charge of the Treasury, and disposed of all the miscellaneous work in the Revenue and Judicial Departments referred to him. He has conducted his duties to my entire satisfaction.

Assistant Superintendent.

162. The several Civil establishments have, on the whole, worked well, and my Head Sheristadar, Mauthenda Appachannah and Naib Sheristadar Kongundra Appiah, who are the oldest and most respected of the head-men of Coorg, merit my special thanks for the efficient manner in which they have supervised the Departments under their control, and also for the ready aid and faithful advice given by them in all matters connected with the interests of the province or of the Coorgs themselves.

Sub-Establishments.

163. I cannot bring the Report to a close without placing on record the great regret experienced by all classes, both Europeans and Natives, at the loss of Mr. Kerr's valuable services. His services are too well known to the Government to need comment from me, and I can only add that he possessed all those varied qualities which are so invaluable in an official in India, in acquiring the confidence and attachment of the people, and thereby ensuring the consolidation and stability of the British Rule.

The late Superintendent.

R. A. COLE,
Superintendent.

Superintendent's Office;
Coorg,
28th May 1866.

APPENDICES.

APPENDIX No. I.

CORRESPONDENCE RELATING TO THE SUB-LETTING OF "JUMMAH" LANDS IN COORG.

(*Vide* INTRODUCTION TO REPORT, PARA. 5.)

From R. N. TAYLOR, ESQ., *Supdt., to Secy. to Commr., Coorg,—No.* 1489, *dated Mercara, 29th April* 1864.

I have the honor to forward, for the consideration of the Commissioner, a letter,* in original, from Colavundra Carriapah, and to request that I may be permitted, under the circumstances, to accede to his request that he may be allowed to sub-rent his jummah lands in such manner as will admit of their being cultivated.

* To be returned.

2. In the Head Sheristadar's case referred to in your letter No. 36 of the 28th September 1863, the Commissioner was pleased to grant the sub-rental of his jummah land for such term of years as I thought fitting, but remarked that a permanent alteration of tenures affecting general principles appeared to him open to objection.

3. It has often occurred to me, since that time, to submit an explanation on the subject of sub-renting of jummah† lands, and as it is one on which the future interests of Coorg are deeply involved, I take this opportunity of offering the following views for the Commissioner's approval.

4. About 60 years ago the jummah tenures of the Coorgs were confirmed by a new title from the hands of the late Rajah Dodda Veerajender Wodier on the same principles as they had been before held, and this title is what the Coorgs of the present day hold.

5. With reference to the sub-renting of their farms, it is necessary to consider what were the principles and conditions of tenure peculiar to the jummah lands in those ancient times, and how far those principles and conditions have been affected by the lapse of time, the intervention of British Rule, and the consequent enlightenment of the people. The chief characteristics of the Coorg jummah tenure were: *first*, that it was permanent and hereditary; *second*, that the assessment was fixed at Rs. 5 for every hundred Butties of land, and was unchangeable; and *third*, that the land was to be cultivated by the slaves attached to every proprietor. The sunnud or title held by each Coorg set forth and declare these three general principles, and in accordance therewith, the tenure continued long after the British Government had assumed the sovereignty of the country, and up to a very late period in our times, only so far differing in its conditions that the British Government refused to countenance, in any way, the retention of slaves.

6. It will be seen, however, that the very existence of a number of bondsmen to each farmer constituted one of the main principles of this peculiar tenure, and from this fact we may trace the cause of a supplementary condition, which was enforced by the Rajah, that every farmer should himself cultivate his own fields by means of the said bondsmen.

† Jumma (*i. e.*, Janum), an hereditary tenure.

There can be little doubt that the system of each Coorg being obliged to cultivate his own fields originated in the fact that he possessed the means of so doing, and the condition gathered strength and permanency as years passed by, because the possession of those means rendered his so doing more advantageous to himself and family than would any other mode of farming.

7. From the last ten years however, and since Europeans began to settle in this country, the ability of the Coorgs to carry out this condition has began gradually and surely to decline, not alone from the repugnance of Government to recognise their bondsmen in any way, but also from the rise in the value of labor, which, if obtained by importation from foreign countries, would so increase the cost of farming as to leave insufficient profit for the support of the proprietor's family. Consequently the jummah ryots have for the last few years, and especially in some localities, been reduced to great straits and difficulties in the cultivation of their fields; many have been obliged, from necessity, to leave large portions of their jummah lands waste, but the majority of Coorgs, rather than endanger their jummah, cheerfully pay every year the full assessment whether the land be cultivated or waste. A time has now come when the inability to cultivate themselves for want of labor has become so pressing, that the Coorgs are forced to resign their jummah lands, thousands of Butties* are lying waste, and there is an annual decrease in the revenue. The ties which bound the old bondsmen to their masters have long since been broken, the large field for profitable agricultural employment has lured them from their ancient homesteads, and the Coorg farmer must either employ labor at a ruinous cost or he must leave his fields untilled.

*100 Butties equal, say, 3 acres. See 1864-65 Administration Report.

8. The headmen of Coorg, many of them in Government employ, and large proprietors of land, speak but the general wish of their countrymen when they ask a relaxation of the custom of not permitting the sub-renting of jummah lands as the only ostensible and unobjectionable way of meeting their present difficulties as to agricultural labor, and they hold that, although the principle is one which must be less advantageous than their own farming, yet, by sub-renting their fields to neighbouring farmers or others on such terms as may be agreed on between them, there will be less loss than by the importation of foreign labor.

9. I am aware of only one objection which might be raised to the removal altogether of any impediment to the cultivation of jummah lands in such manner as the title of the holder allows, without any general condition as to his positively doing so himself (which, however, he is no longer in a position to do), and I do not think that objection a serious one. It is this: that many of the more influential Coorg houses having representatives in office, it is possible that the permission to sub-rent jummah lands to any extent may be made available for the purpose of enlarging the possessions of any one house to the prejudice of the Coorg people, but I consider that any such rule introduced as an amendment on a tenure, one of whose conditions has become impossible, should apply only to the ancient hereditary farms, and by this means the objection would become groundless.

10. It cannot but be admitted that one of the general principles of this tenure, namely, the third, which declares that the land is to be cultivated

by slaves, has become obsolete; and I am of opinion, and beg to recommend for the Commissioner's sanction, that the propriety of allowing the sub-renting of their ancient jumma holdings by the Coorg jumma ryots being dictated by the want and great value of agricultural labor at the present day in Coorg, the Superintendent be authorized to give permission to sub-rent in all such cases of ancient and hereditary farms only as in his discretion he may consider the welfare of the whole body of ryots to justify.

From A. C. HAY, ESQ., *Secy. to Commissioner, to the Supdt. of Coorg, No.* 27—4, *dated Bangalore,* 18*th May* 1864.

The Commissioner desires me to state, in reply to your letter No. 1489, dated 29th April 1864, that he is unable at present, and without fuller information as to the general feelings of the people, to entertain the proposal made therein that all jumma ryots in Coorg should be permitted to sub-let their lands.

2. The abolition of agrestic bondage has no doubt cut off a source of labor which was formerly available, but the Commissioner is not prepared to assent to the observation that this alone has led to land remaining untilled. To some extent this is perhaps true, but he has reason to believe that the profitable nature of coffee planting, the berry being grown in land previously uncultivated, has led to much labor being diverted from rice-lands to coffee-gardens.

3. The real point at issue appears to be a question of profit, that is to say, that foreign labor is more expensive than indigenous labor, while it is of a migratory instead of a fixed character, and is therefore not always to be depended upon. The Commissioner does not, however, consider that the Coorgs are worse off than before, which one might presume to be the case were your views entirely reliable. On the contrary, it is known that they are very well off, and therefore, he conceives, able to pay for imported labor. Their jumma rents are probably the lightest in India, and they will also hold their coffee plantations on most favorable terms.

4. The Commissioner does not possess sufficient information on the subject to enable him, without making enquiries in the district personally (which he hopes to do next season), to pronounce a decided opinion on it, and it must therefore remain for future consideration. He observes that the previous objection to the practice of sub-letting arose from the declaration that the proprietorship of land rests in the sovereign power, and that the ryots are mere lessees. The State gives them land on very low rates of assessment on certain conditions and with certain privileges. These privileges are undoubtedly very great, and do not appear to the Commissioner to have been seriously diminished by the loss of some of the agrestic laborers; at any rate not so much so as to warrant the abrogation of the whole tenure.

5. If the Government were to annul the tenure, which it virtually would do by admitting sub-leases as valid, it follows that it would be entitled if it thought fit so to do to raise the jumma rates. The Commissioner does not think that the Government could permit jumma ryots to sub-let at higher rates than those paid to itself, or the lease

would be invalidated, while raising the Government rates would tend to general discontent. On the whole, it seems to him that it is only the influential public servants who would benefit by sub-letting, and that in all probability, the ultimate result would be that others in less favored circumstances would fail in securing labor, that their revenue would not be paid, that their leases would have to be annulled, and that the land would fall into the hands of large proprietors, thus upsetting the whole frame-work on which the tenure of land is based.

Petition returned.

6. No answer can be given at present in favor of C. Carriappa, which would not be applicable with as good reason to numerous other officials.

From J. A. CAMPBELL, ESQ., *Actg. Secy. to Commissioner, to the Supdt. of Coorg, No.* 503—46, *dated Bangalore, 6th March* 1865.

The Commissioner having received, when in Coorg, numerous representations from jumma ryots in favor of being permitted to sub-let their land on Warum tenure, I am desired to state that he has been induced to reconsider the question referred to in the following letters :—

From Superintendent, No. 1489, dated 29th April 1864.

To ditto „ $\frac{27}{4}$ „ 18th May „

2. The Commissioner entertains some doubts whether all the petitions presented to him recently were spontaneous, inasmuch as he received none on the subject under notice in North Coorg, when unaccompanied by any of the higher officials. However that may be, it would appear that the jumma ryots in South and Central Coorg are tolerably unanimous at present about the supposed advantages of sub-letting, and this, the Commissioner observes, narrows the question greatly, though doubts may be expressed whether the royts, as a body, are able to foresee what the probable effect would be.

3. It must be remembered that Coorg is no longer, as formerly, an isolated region, the labor being purely indigenous, but that now being open in various directions, thousands of persons find employment in the district. It stands to reason, therefore, that were sub-letting permitted, and no restrictions enforced, foreign labor would be at the disposal of the richer Coorgs who would monopolize it, while the poorer jumma ryots would be worse off relatively than before, and might fail possibly in their engagements to Government. It is in this latter respect only, I am directed to remark, that the practice of sub-letting would appear to be injurious to the Government, and the proposal of the Coorgs might be at once acceded to, were it not that the poorer ryots are likely to suffer ultimately.

4. The Commissioner is quite unable to credit the statement made by Captain Taylor that the jumma ryots are now cultivating at a loss to themselves.

It is more probable, as previously stated, that labor is diverted to coffee-planting, and that the ryots have not hands enough to carry on this and rice cultivation as well. It is also likely that want of water and murrain, among cattle, have had some thing to do with the fact that much land is waste.

5. The only checks that can be placed upon sub-letting by Government are apparently—

1st.—To restrict sub-letting to the case of indigenous laborers on estates so as to maintain the present relative position of the several ryots.

2nd.—To limit the amount of rent to be levied by ryots from their sub-tenants.

3rd.—To restrict sub-letting to a fixed portion or proportion of a Wurg, not exceeding in any case the family home-farm.

4th.—To make it obligatory upon a ryot to pay the sagoo rate for land which he may take up after sub-letting any portion of his present jumma holding.

5th.—To forbid the sub-letting of jumma lands to sagoo* ryots.

6. The Commissioner reserves any opinion at present on the relative advantages of these courses, but desires that the question should receive further consideration, and be reported upon by you after making fuller inquiries. The Commissioner presumes that it will be necessary to send for the more influential ryots, including such as are unconnected with the leading officials, and to explain to them what would probably be the ultimate result of permitting indiscriminate sub-letting, that is, that the smaller proprietors would be swallowed up by their more powerful neighbours.

7. I am directed to observe that, if sub-letting is determined on, there can be no distinction allowed between older or more recent holdings, as any change of tenure must be applied impartially to all jumma ryots.

8. In submitting your report, it will, the Commissioner remarks, be advantageous for you to ascertain what has been the practical effect of sub-letting in cases where it has been expressly permitted, and what the terms of the sub-leases have been.

From R. A. COLE, ESQ., *Offg. Supdt., to Commissioner of Coorg, No.* 888, *dated Coorg,* 28*th August* 1865.

I have the honor to submit, for the consideration and orders of the Commissioner, the report on the subject of the jumma ryots of Coorg being permitted to sub-let their lands on Warum tenure called for in your letter No. $\frac{503}{46}$ of the 6th March last.

2. I would beg to premise my report by expressing my regret at the delay that has arisen in submitting it. I was not acquainted with the country or its institutions; and as the future interests of Coorg and of the Coorgs, as well as the landed tenures of the province, seemed so deeply involved in the consideration and decision of the subject, I was unwilling to commence the report till I had made the fullest enquiries, both amongst the people and through the records of the Office, and carefully studied the peculiar institutions of this most interesting race.

3. On assuming charge of the province, I had to conduct the jummabundy of the Western Talook of Padynalknád; and, as the inhabitants of each village successively came up, I called upon them to state

* Sagoo, to cultivate. Such ryots pay Rs. 10 per 100 butties, or nearly double the rent paid by jumma ryots.

their wishes and opinions on the subject of general permission being given for the sub-letting of jumma lands, and at the same time I carefully pointed out to them the probable consequences in the smaller proprietors being swallowed up by their more wealthy neighbours. There was not a dissentient voice. They were all in favor of it. It was not only thus in public I questioned them on the point, when it may be supposed that they spoke out under the influence of the higher officials present, but during my walks and rides, when unaccompanied by any official, I availed myself of the opportunity to have unrestricted conversation with the people whom I met, and I found the result to be the same. All were in favor of the measure.

4. I am also much indebted to the Coorg officials marginally noted for much valuable information; and I would beg to annex the Memoranda drawn up by Mr. C. Soobbiah and C. Carriapah as illustrative of the views and opinions of the leading Coorgs themselves, and to pass in review the various points that have been urged both for and against the measure.

Mr. C. Soobbiah, Asst. Supdt.
Head Sheristadar.
Naib ,,
C. Carriapah.
Moktasir of the Duryaft Cutcherry.

5. When jumma ryots are desirous of giving up their lands, the rules in force insist on the preference being given—

1*st*.—To the Wurgdar.

2*nd*.—To the proprietor of the adjoining estate.

3*rd*.—To the inhabitants of the same village.

So that the more opulent or powerful neighbour has to contend against these preferential claimants, as well as against the poorer ryot, though it must be admitted that, generally speaking, the covetous neighbour will be found amongst these three classes of claimants.

Then arises the broad question whether it is not better, for the interests of both the Government and the country, that such a class of Zemindars should spring up; whether the opulence of such a class, under the restrictions to be proposed hereafter, should not be brought to bear in improving and developing the resources of the country rather than that country be allowed to struggle on, from generation to generation, with its resources unimproved, and but slowly developed, owing to the indigence of the proprietors of its soil? The petty proprietor, too poor to cultivate his own land, indebted, and with his fields lying waste around him, would sink into the tenant, and would find employment and the means of living. Again, as long as the jumma assessment is so much lighter than the other rates of assessment, the indigent ryot would find it more to his interest to sub-let his land than to part with it altogether. Persons seeking to obtain the cultivation of land on Warum tenure would find it easier to drive a bargain with him in the minor details of a division of produce, if not of the grain itself, than with his more opulent neighbour. In support of this opinion, I would mention that at present an indigent ryot does not request permission to sell, but only to sub-let his lands; and, after due enquiry as to his circumstances, permission is granted, and he sub-lets his land on Warum tenure. The widow and the orphan do not give up or request leave to sell, but only to sub-rent. Such is the tenacity with which the Coorgs cling to their patrimonial estates.

It must also be borne in mind that no opulent stranger, attracted by the low rate of assessment, can be admitted into the ranks of jumma ryots. Those only who held land on that tenure during the days of the Rajahs can now hold such lands, and it is only from their own ranks that such Zemindars can spring; and I believe that their presence would prove a source of prosperity to the country and of strength to the Government.

6. With regard to the loss likely to accrue to Government by lands being taken up in excess on jumma tenure, it might be stipulated, as suggested by the Commissioner, that no such land is to be sub-let to a sagoo ryot holding land from Government unless he continues to hold and cultivate his own sagoo land; and assessment should be made leviable on the land whether waste or cultivated. Preference might also be insisted upon to be given to the agrestic laborers on each estate.

If it was considered undesirable that a class of wealthy landed proprietors should spring up, it might easily be stipulated that only land, now held on jumma tenure, should be sub-let, and that all fresh land taken up must be for self-cultivation, and not be given out on Warum tenure.

7. The loss likely to arise by a diminution under the head of house tax and dooly batta would be far more than met by increased cultivation, and the stimulus given to all branches of the revenue by the presence of those imported to carry on that cultivation.

8. With regard to the importation of labor, the great demand for coffee cultivation, and the difficulty of importing that labor, will always prove a check to an excess of land being taken up. The difficulty of keeping the labor, when once obtained, in such an inclement climate is also very great. The deaths of cattle, owing to murrain and to the inclement seasons prevailing in Coorg, are large, and will also operate as a check.

9. In the Yeloosaveraseemy Talook and the Nunjerajputten and Ramasawmy Kanave Hoblies of the Nunjerajputten Talook, the jumma tenure does not exist, and jumma ryots hold land on sagoo tenure chiefly for the cultivation of ragi, pepper, and tobacco, and sub-rent their lands on the Warum tenure.

10. I would beg to subjoin an extract from General Fraser's despatch, dated 30th August 1834, to the Government of India, written shortly after our assumption of the Government of the country. General Fraser states—

"I understand that although it not unfrequently happens that jum-
"ma ryots wish to change their lands, it but rarely occurs that they
"desire an extension of the quantity originally granted to them for
"cultivation. There are two checks to this: the Nazur of 10 per cent.
"to be paid to the Sirkar (besides the Rs. 5 per annum afterwards for
"every 100 butties), and the limit imposed by want of means to culti-
"vate, as the ryot can do this only through the instrumentality of his
"own labor or that of his family and servants. He cannot transfer or
"alienate his jumma land to another even for a time. If he finds that
"he has more than he can cultivate, he gives up what he has in excess,
"but the new tenant or lessee gets it (if he is of any other caste than

"the Coorg or of the few castes who usually hold land under the jum-
" ma tenure) at the ordinary rate of Rs. 10 or Rs. 12 per 100 butties, and
" not at the jumma rate of five.

" The practice of sub-letting never can obtain in this country. If it
" could, we should soon have numbers of great Zemindars in the district.
" A whole Naad might fall by degrees into the hands of an individual, a
" capitalist from Mysore perhaps, or the districts below the Ghauts, and
" the lightness of his assessment would enable him to sub-let it to others
" with personal advantage, though without personal care or labor. But
" this is effectually prevented by the usage of the country which decid-
" edly forbids it, and the principle that obtains of regarding the pro-
" prietary right to the soil as originally vested in the sovereign. He
" grants a certain quantity of land to a ryot at a certain annual rate, and
" for a time divests himself of his property. But the land has been
" granted to that particular individual and to no other, it has been let
" at a specific rate of tax, and no other. Let another tenant be found
" there paying to the actual lessee a higher rate of tax than that fixed
" by the Sirkar, and the lease is *ipso facto* annulled; the land falls
" again into the possession of the sovereign power, and is again at its
" disposal."

The Nazur of 10 per cent. is still paid on all fresh land taken up on jumma tenure, though I do not believe that in these days it would form any serious obstacle to the taking up of land. General Fraser, when penning that despatch, was evidently not aware that no "capitalist from Mysore" or elsewhere could be permitted to take up lands on the jumma tenure unless he, or his ancestors, had obtained the jumma sunnuds from the former rulers of Coorg.

The concluding remarks of General Fraser are well worthy of consideration. Supposing the sub-lessee obtains prescriptive right of occupation by long enjoyment, will the original proprietary right, supposed to be vested in the sovereign, be considered as lapsed? or will the Government be at liberty to resume possession on defalcation of the original lessee, to whom the Government can alone look irrespective of the sub-leases? In the event of any such defalcation, the Government would then take the place of the lessee in regard to the sub-lessee and, as all such sub-leases would undoubtedly be at much higher rates than the original jumma rate, it would not be difficult to maintain terms, or enter into fresh ones, with the sub-lessee.

11. We cannot be too careful in adopting measures to prevent that complication of tenant rights which has proved the source of such trouble and vexation in Bengal. Remedial measures will be more difficult than preventative, and the question will have to be considered most carefully in all its bearings both on the present and on the future.

12. Captain Taylor's statement that jumma ryots are now cultivating at a loss to themselves is utterly fallacious, as I have shown in the memorandum of the relative cost and profit of cultivating land in Coorg lately furnished to you. The ryots are also now allowed to cultivate 10 acres of their Banay lands, with coffee, free of assessment. Taking the produce of those 10 acres at 8 butties per acre (it may be from 10 to 15), and the selling price on the spot at Rs. 5 per butty, the realization will be Rs. 400, of which Rs. 200 to Rs. 250 may fairly be calculated as profit.

Here is another reason why an indigent ryot would rather sub-rent than sell right out. As far as I can ascertain, all sub-leases have been on the Warum tenure, and possession has been resumed by the lessors as soon as they were in a position to do so.

13. With regard to any limit being placed on the amount of rent to be levied by the ryots from their sub-tenants, I consider that it would be preferable to allow it to regulate itself. Government interference in such a matter would be easily and daily evaded, and would be contrary to the spirit of true progress. The rise of prices will doubtless, year by year, affect the value, and influence the mutations of landed property.

14. This again leads us to another consideration. If no fetters be placed on the increase of the value of landed property, the tenants will naturally demand and obtain from the sub-lessees the market rates of the day, whilst the Government will be restricted to the permanent assessment of the jumma rate of Rs. 5 per 100 butties. Thus the Government, as the landlord, will actually be debarred from obtaining any share in the enhanced value of its own land.

15. The jumma tenure, though of a feudal nature, is essentially a permanent assessment, and any measure which will ensure to the Government a share in the rising value of its own land will necessarily affect the very foundations on which that tenure is based. The Commissioner is evidently aware of this, and has pointed out that any concessions, as regards the sub-letting of jumma lands, will virtually break the existing contract, and will entitle the Government to raise the rates.

16. In paragraph 45 of the Judicial Report for the past year, I have earnestly deprecated any measure that would affect the jumma tenures of Coorg. If, however, we now calculated the proportion of rent paid by a jumma ryot, and enhanced the rates hereafter, say every 20 or 30 years, exactly in the same proportion, jumma ryots would not have any just cause of complaint, more especially as they are now relieved of so many of those feudal duties which the Rajahs insisted on. But I believe any such measure would be received with considerable distrust and suspicion. The Coorgs pride themselves much on their position as jumma ryots, and are just as ready to turn out now and aid us as they were in the days of our wars with Tippoo Sultan. Moreover, the costs of cultivation and losses of cattle are daily increasing, and there is no doubt that, owing to the great increase in the prices of all necessaries of life, the ryot does not find the profits of the present day go further, or as far, as his more moderate profits of 40 years ago; when, though his profits were not so high in hard cash, still all articles were procurable at a far less cost.

17. This again leads to the consideration as to whether a permanent assessment, which has certainly worked well, should be maintained, or be made to give way to a fluctuating assessment. Whether the Government, as inherent lord of the soil, should content itself with receiving the share of the value of its land, which it bore some 40 or 50 years ago, or whether, by a moderate and equitable, nay, a simply proportionate, adjustment of its rents at long intervals, it should not secure to itself a fair share of the market value of the day? The province of Coorg, however, is placed in a most peculiar position. The permanent settlement has existed for some 50 or 60 years, and has decidedly been found to work well. We have secured the full confidence and loyalty of

a gallant race; and any measure likely to affect that tenure, on which their fealty is based, cannot be too strongly deprecated. We must remember too that this tenure only affects the rice-fields of Coorg, and that ere long coffee will have become the principal product.

18. I would, however, remark that the Coorgs have only requested permission to sub-let on the Warum tenure or division of crops, and not to sub-rent.

19. Intimately connected with the points mooted in this letter is the recognition by Government of the sale of jumma lands. I would beg to annex a draft notice prepared by Mr. Kerr, which I found in the Office.

Such sales might be allowed between jumma ryots, but the general recognition of the sale of such lands would prove a death-blow to the feudal tenure, and even to the nationality of the Coorgs. The purchasers, if strangers, could not become jumma ryots, and the Coorgs might gradually succumb, as such races have done elsewhere, fall into a lower social position, and eventually disappear. I fully concur in the general principle that no Government should interfere to regulate the mutations of landed property, but leave it as unfettered as trade; but I would earnestly deprecate any measure that would so affect the nationality and existence of this race, and trust I have shown, by my remarks in the Annual Report of the Administration of this Province for the past year, that it would prove both interesting and useful to foster this nationality and preserve it intact.

From L. Bowring, Esq., *Commissioner of Coorg, to the Secy. to the Govt. of India, Foreign Dept., with the Govr. Genl., No.* 274—20, *dated Bangalore,* 12*th September* 1865.

The correspondence,* which I have the honor to submit herewith for the orders of the Supreme Government, relates to the sub-letting of jumma lands by Coorg ryots, and as the subject is one which vitally affects the whole system of tenure now prevailing in that district, it appears to me necessary to lay it in all its details before His Excellency the Viceroy and Governor General in Council.

*From Supdt. of Coorg, No. 1489, dated 29th April 1864.
To Ditto „ 247, „ 18th May „
To Ditto „ 503/48, „ 6th March 1865.
From Ditto „ 888, „ 28th August „

2. It will be observed that according to the ancient laws of Coorg sub-letting was prohibited, but that under present circumstances, the jumma ryots are generally desirous that this rule should be relaxed, and that they should be permitted to sub-let their land on a Warum holding, that is, a division of crops. The present reference, therefore, virtually constitutes an application from the ryots themselves, and does not emanate from Government officials. When the subject was brought officially to notice by Captain Taylor in his letter of 29th April 1864, I was not satisfied that sufficient enquiry had been made into the wishes of the ryots, and the reply sent by me intimated that the question would be considered again after I had had an opportunity of ascertaining personally the opinions of the people, and the probable effect of rescinding the existing prohibition to sub-letting. When in Coorg in February, I availed myself of the opportunity for prosecuting enquiries on the

subject, and from the numerous petitions presented by ryots asking for permission to sub-let, no doubt was left on my mind that the wish to do so was general and genuine. My letter No. $\frac{503}{48}$, dated 6th March 1865, was addressed to the Superintendent after my return from this tour, and the result of the further enquiries instituted by him will be found in his reply just received, No. 888, dated 28th August 1865.

3. The question having been thoroughly ventilated, appears to me to be ripe for decision, and I am of opinion that the wishes of the ryots may be acceded to, so far as the interests of the Government are concerned. His Excellency in Council will observe that the possible risk of interfering with the old law of the country has been put before the ryots in all its features, but no arguments that have been adduced against the change have shaken their confidence in the propriety of the proposed relaxation. Virtually, therefore, there is no difference of opinion on the main question, and it is only necessary to advert to two points; *firstly*, whether, if the old tenure is relaxed as regards sub-letting, the Government should prefer a claim to a higher rent than is now paid by ryots, that is, Rs. 5 per 100 butties, or say 3 acres; and, *secondly*, whether any restriction should be put upon sub-letting under either of the heads enumerated in paragraph 5 of my letter No. $\frac{503}{16}$, dated 6th March 1865. On the first point, I submit that no change is desirable. It has been shown, in the Coorg Administration Report for 1864-65, that the profits of a jumma ryot are 20 per cent. when he uses his own bullocks, and the picture given by Captain Taylor in paragraph 7 of his letter is therefore much over-colored. At the same time, it is probable that the ryots' profits are less than they were formerly, while it is certain that the dearth of labor is great, and that the Coorgs cannot compete with the planters, and that their hereditary agrestic hinds are gradually leaving their service for more remunerative employ. So far as the Government interests are affected, both politically and financially, it would be better not to exercise the right of raising the jumma rents, but to trust to increased cultivation for raising the land revenue. On the second point, it will be seen that the Superintendent inclines to an opinion that the checks already in force are sufficient to secure land from falling into the hands of outsiders. (*Vide* paragraph 5 of his letter of 28th August 1865.) To this it may be added that the higher Coorg officials do not entertain any apprehension on this score, should these checks be preserved. This I think is advisable, as indiscriminate sub-letting would enable the more powerful ryots to secure all the available labor to the exclusion of their poorer neighbours; and although proprietors of foreign origin cannot be admitted to the privileges of the Coorg jumma ryots, so long as the sale of jumma lands is prohibited, the relative position of the several ryots themselves must needs be affected were no check put upon sub-letting. Whether such a result is desirable or not is a difficult question to answer, but, politically, it does not seem prudent to create great Zemindars among a people who are singularly national and local in ideas and habits.

4. The Superintendent enters at length into the details of the subject in his letter of August 28th, but, although there is force in some of the remarks made by him, I consider that so radical an innovation as that now suggested should be introduced tentatively, and that it might be prudent to restrict sub-letting in the first instance to a fixed portion of a Wurg (Farm) not exceeding the family home farm. (*Vide* the third

alternative referred to in paragraph 5 of my letter No. $\frac{503}{46}$, dated 6th March 1865.) Should the experiment prove successful, the measure might be extended hereafter. I think also that if after sub-letting any portion of his jumma land, the ryot should take up any fresh land, he should pay the sagoo rate of Rs. 10 per 100 butties. Also that no jumma lands should be sub-let to sagoo ryots unless such ryots continue to hold and pay rent for their sagoo lands, as the doing so would undoubtedly throw much Government land out of cultivation. (*Vide* points 4 and 5 in paragraph 5 of the letter just quoted.) I concur with the Superintendent that it would not be expedient to interfere with the terms of sub-letting between the ryot and the actual cultivator.

5. In regard to the sale of jumma land, I am not prepared to admit its advisability. Many impoverished Coorgs might wish to dispose of their lands, but I think official sanction to such a step should be withheld as hitherto, as I believe it would be fraught with danger to the nationalty of the Coorgs, as represented by the Superintendent, and that the tenure itself, of which conditions of service are a main feature, would be abrogated by permitting such land to fall into the hands of Europeans or natives of Mysore, from whom a service like that rendered by the Coorgs could not be enforced.

From A. COLVIN, ESQ., *Offg. Under Secy. to Govt. of India, Foreign Dept., to the Commr. of Coorg, No.* 392, *dated Simla, the* 4*th October* 1865.

In reply to your letter dated 12th ultimo, No. $\frac{274}{26}$, relative to the sub-letting of jumma lands in Coorg. I am directed to state that the Governor General in Council agrees to all your proposals, and authorizes you to carry them into effect.

Coorg Commissioner's Office, No. 378-61, *dated Bangalore,* 23*rd October* 1865.

Copy of the foregoing, together with a copy of the letter and the enclosures to which it is a reply, is forwarded to the Superintendent of Coorg for information.

By Order,

(Signed) J. A. CAMPBELL,

Acting Secretary.

APPENDIX No. II.

MEMORANDUM ON PUBLIC WORKS IN COORG BY MAJOR SANKEY, R. E., WITH THE CORRESPONDENCE THEREWITH CONNECTED.

(*Vide* INTRODUCTION, PARA. 16.)

From L. BOWRING, ESQ., *Commr. of Coorg, to Secy. to Govt. of India, P. W. Dept., No.* 442—23, *dated* 15*th November* 1865.

In submitting, for the information and orders of His Excellency the Viceroy and Governor General in Council, the accompanying memorandum by Major Sankey on the state of the communications in Coorg, together with the Chief Engineer's remarks regarding the same, I may be permitted to add some observations of my own, as most of the lines of road referred to were inspected by me during my visit to the province in the early part of this year.

2. I have thought it advisable to forward Major Sankey's notes in original,* as the illustrations and map which accompany his able and graphic account will materially aid the Government in arriving at an accurate idea of the difficulty of the work in hand; the obstacles presented by the climate; the clearance of forests; and the dearth of labor, as well as by the insufficient allotment now assigned to the province.

* To be obligingly returned with the map.

3. The singular effect produced on Coorg roads by the extensive clearance of jungles by coffee planters has not hitherto been represented in so intelligible a shape as that in which it is depicted by Major Sankey. The matter, however, has not escaped attention, and in the Coffee Land Rules, recently introduced under orders from Government, a clause is inserted (in the Title Deed) that land is not to be cultivated within five yards of a public road, and that the natural fringe or revetment formed by brushwood or grass is not to be destroyed. It is apparent, however, that where clearances have been made, the evil referred to is already in existence, and it is not easy to see how it can be remedied. The subject is touched on in paragraph 34 of the Superintendent's Report for 1864-65, and the prejudicial effect on rice-lands by the monsoon torrents being precipitated down the bare sides of hills,—no jungle being left to intercept their course,—was not unfrequently brought to my notice by the Coorg ryots. It does not appear, however, to have been proved that the denudation of the forests has lessened the rain-fall, although I entertain little doubt that the monsoon floods are, when deposited, carried rapidly off where the jungle has been cleared, and that they are, therefore, less beneficial than they would otherwise be. Although, then, the diminution of the rain-fall may be considered still a debateable point, I am disposed to think that the velocity with which the hill streams are now being carried down to the Cauvery, and thence to the sea, may, as observed by the Chief Engineer, act detrimentally on the irrigation works in the Coimbatore, Trichinopoly, and Tanjore Districts of the Madras Presidency. As a similar effect to that observed in Coorg must be produced in the contiguous district of Wynaad, it may not be out of place to suggest that the attention of the Madras Government might usefully be directed to the subject.

4. Major Sankey gives in his memorandum an accurate account of the present state of the main lines of communication. These great roads

were avowedly constructed for general, political, and military reasons, without reference to the small province of Coorg, and the charge of construction and of maintenance up to 1862 was borne by the Madras Government. In that year the roads were transferred to the superintendence of the Chief Engineer of Mysore, and as it was apparent that the yearly cost would be great, I ventured to suggest to the Government, in June 1862, that a portion of the outlay should be borne by Madras and Mysore, both of which benefitted by these lines in a greater proportion than Coorg itself, which is only a link in the main communication. The Government, however, ruled that there was no advantage in so apportioning the expenditure, and the whole cost has been debited to the Coorg Budget. But, as I foresaw at the time, the stinted Budget of that province has proved insufficient to meet the necessary expenditure, and I concur with Major Sankey that, unless a much larger allotment yearly is made, the great Ghât roads cannot be kept in an efficient state, providing at the same time for the inter-communications of Coorg itself, which is now a centre of European enterprise, and is being colonized in every part, with an increasing revenue and a thriving trade.

5. It will be seen from Major Sankey's memorandum that some of the lines are defectively traced, and this is especially remarkable in the main line from Mysore to Mercara itself, *vide* paragraphs 17 and 18. Some rectification of the objectionable gradients which now attract the notice of every traveller, would appear to be highly desirable, but it would be premature to offer any opinion on a point which demands an accurate knowledge of the country without a full examination of all the peculiarities of the several hills. The Government will, doubtless, observe that the defect is more susceptible of remedy since the numerous clearances already made have partially opened the country, and laid bare what was previously hid from view.

6. The Sumpajee or Mercara—Mangalore road is evidently the best in the province, and requires little alteration, save between 9th and 10th mile at the point referred to in paragraph 31 of the memorandum.

7. Having only seen a portion of the road from Mercara to Veerajendarpet, called somewhat erroneously by Major Sankey the Veerarajendarpet Ghât, I am unable to add any thing to his remarks; but the sketch which accompanies, affords an apt illustration of the disastrous effects produced by the removal of jungle above a Ghât road.

8. The Periambaddy Ghât, or the road from Veerarajendarpet towards Cannanore, is by no means so good a line as the Sumpajee Ghât. It superseded the old Heggala Pass to the Stony River, and was of course a great improvement on the former Gorge Road, but as observed in paragraph 51 of the memorandum, there are severe gradients above and below the Wattacoli Bungalow, which, however, Major Sankey considers to be partially remediable, though not altogether so.

9. The attention of the Superintendent of Coorg will be called to the remarks made in paragraphs 63 to 66 of the memorandum.

10. In paragraphs 72 to 93 will be found an interesting account of other main lines of road, with suggestions for improving the embankments where wet land is crossed. I beg to point out the great damage caused by recent floods, brought to notice by Major Sankey, from which it would

appear that, in the case of many bridges, the water-way is insufficient, which may, perhaps, be, in a great measure, accounted for by clearings of forest higher up the streams.

11. I concur with Major Sankey that nothing need be done at present to the Veerarajendarpet—Bitungal road, a short line connecting the former place eastward with the main Mysore—Cannanore line.

12. The Mercara—Codlipet road, now in course of construction, is undoubtedly a most useful work; it is well laid out, and will, I believe, fully answer the purpose for which it was designed. As a communication between Munjerabad and Coorg, it is most valuable, and its construction will gradually open up a great deal of fine coffee-producing land. It is clear, however, that the line will be incomplete without numerous bridges, and that these must cost a large sum. Major Sankey is, therefore, I think, justified in suggesting that they should give place to the more important project of bridging the Cauvery between the two principal places in Coorg, that is, Mercara and Veerarajendarpet.

13. The proposed line from Veerarajendarpet to Fraserpet *vid* Siddhapoor, is one which the planters are anxious to see carried out. I do not, however, consider that the old high road to Periapatam could be made trafficable for carts, except at a heavy outlay. It is paved in many places, and the stone-work would have to be all removed, while there are several streams to be crossed with high banks on either side. Nevertheless, this is the direct road to Mysore, and it is worth considering whether, omitting the bridges, the line could not be made a fair-weather road.

14. The Mercara—Tul Cauvery Line, though to a certain extent useful, is not, I consider, of primary importance, more particularly as I believe it would be impracticable, except at an immense outlay, to carry the road over the Turikane Ghât, referred to in paragraph 122, the hill being very precipitous on the northern side.

15. The remarks in paragraphs 127 — 131 are deserving of attention. All the lines mentioned, however, are traversable by bullocks, and I marched over them myself with little difficulty, considering the obstacles presented by the smaller hills and the intervening rice-lands. Their development on an extensive scale may, I think, be safely postponed, but among them, I would draw attention to a proposed line from Veerarajendarpet to Wynaad *viâ* Kigutnaad, which is as important to South Coorg as the Mercara—Codlipet line is to North Coorg. I think this should take precedence of all the other lines mentioned. The road would be about 40 miles long, and would confer a great benefit on the two districts of Coorg and Wynaad, while, by keeping on the eastern side, where bamboo jungle prevails, its construction would be less costly than that of roads in the hilly regions of Coorg. At the same time, I would suggest that the data given in paragraph 135 of the memorandum should be tested, before embarking on a net-work of roads suited only for bullock traffic.

16. I do not propose to enter into any analysis of the probable yearly expenditure on the various lines of communication detailed in paragraphs 138 to 144 of Major Sankey's memorandum, as the estimate is necessarily only approximate; but, so far as I can judge, he has not in any way exaggerated the cost of construction and maintenance, and I think his observations are entitled to full consideration. In paragraph 4, I have stated

my views as to the provision to be made for existing roads, and I feel assured that, unless the Coorg Budget is largely supplemented, or unless, on the other hand, a portion of the charge is defrayed by Madras and Mysore, justice cannot be done to the existing communications. But, pending an expression of the views of Government, it would be premature to discuss the necessity for so large an establishment as that recommended by Major Sankey. The main objection to it that occurs to me is that the pay of all Coorg officials being miserably small, and the Government having declined to raise it, notwithstanding the arguments adduced in favor of the measure by the Superintendent and myself, it might seem unfair to organize, in spite of this, a costly Public Works Department, with all the advantages of sufficient emoluments which have been denied to old servants of the State. Indeed, the scale of wages given by Major Sankey in paragraph 158 will show how hardly pressed the Coorg officials are, it being shown that coolies are receiving higher pay than subordinate Government officials.

17. The Government will, no doubt, observe with satisfaction that it is probable that an efficient staff of Coorg subordinates may be trained up hereafter for service in the Department, on the distinct understanding—which the Coorgs would jealously hold to—that they are not to be transferred elsewhere out of the province.

18. In the commendations bestowed by Major Sankey on Mr. Stoddard, I fully concur, as I know from personal observation that they are fully deserved.

Report by MAJOR R. H. SANKEY, R. E., *upon the present position of the Public Works Department in Coorg.*

General Observations,—Mootramuddy Bridge.—In 1862 a small platform bridge, 9 feet wide by 4 feet high, placed in one of the numerous short embankments on the Mercara—Veerarajendarpet road in Coorg, was carried away by a flood, and the Assistant Engineer, Mr. Stoddard, submitted an estimate, amounting to Rs. 2,110, for reconstructing the work, increasing the bridge to a span of 12 feet, and raising the embankment throughout, making in fact apparently all reasonable provision for meeting the requirements of the highest probably flood.

2. But the floods of 1863 proved much more serious than had been anticipated, and a second design had to be framed for a bridge of double the capacity.

3. Last year's floods coming down with still greater power, and further, the labor rate having sensibly increased, a third revision was found essential, bringing the estimate up to Rs. 14,960, or seven times the amount originally contemplated.

4. Viewing the whole circumstances of this case, and others bearing a close analogy to it, the Chief Engineer considered a strict enquiry on the spot essential, and with this object I proceeded to Coorg on the 19th ultimo.

5. Having now carefully inspected the works in question, I am clearly of opinion that the Assistant Engineer has acted with all reasonable foresight in framing his successive estimates with the data of

previous floods before him, but that, from the daily changes now being wrought in the physical condition of Coorg, these data cannot be accepted as guides to the future.

6. *Increased floods due to Coffee clearings.*—In the former condition of the country, when dense-rolling forest covered all but the mountain tops, and the rice-lands in the deep intervening valleys, the rain-fall was in part sucked up by the redundant vegetation, in part absorbed into the earth being stopped from flowing off by thickly interlacing roots, in part evaporated from countless leaves and stems, and only probably a comparatively small portion enabled to flow off at once into the various streams.

7. It appears to me, however, that, in consequence of the great areas of forest land now laid bare yearly by the planter, the rain-fall is discharged much more rapidly down the mountain slopes than was formerly the case, among other results, giving rise to floods of yearly increasing magnitude.

8. That such must necessarily be the result of extensive clearings would, I should think, be at once admitted. I shall give hereafter certain proofs that at least the argument does not rest on theory: meanwhile, the mere statement of the fact in reference to a country with the known heavy rain-fall* of Coorg must give rise to vague apprehensions for the future.

* *Rain-fall at Mercara.*
1863-64 . . 135 inches.
1864-65 143 „
It is believed to be much heavier at Periambady Ghât.

9. *Necessity of a general consideration of the Departmental position.*—The consideration of the general question as to the effects of clearings in other tracts as well as Coorg, on the bridges, anicuts, and other river works down to the sea, though naturally following, is much beyond my powers and present object, I trust, however, I may be excused for deeming it of sufficient importance, even in the limited sense of its direct effect on Coorg works, to warrant my converting what was originally intended as a simple professional report on two or three individual works into one of a more general nature relating to the present position of the Department, and the work before it, under the peculiar circumstances above described.

10. *Other reasons.*—The present time also appears, for other reasons, suitable to such a consideration of our position. It was not till three years after the British had possessed themselves of the country that the impossibility of moving a force into South Coorg to subdue the rebellion, which had there sprung up (1837), demonstrated the absolute necessity of constructing some kind of military road, and the Sumpagee Ghât was made by Lieutenant Fast, of the Engineers. The Anachowkoor road and Periambady Ghât were finished some 12 years later also as a military necessity, the old line to Cannanore through Wynaad, and by the Periah Pass, proving altogether impracticable. The connecting road between Mercara and Veerarajendarpet, with a similar military object, was made about the same time.

Military Roads.

11. At this moment these three military roads remain practically the only (*a*) ones devoted to wheeled vehicles in the country, and it will be seen

(*a*) Carts, it is true, have passed over the new Mercara—Codlipett road, but the work is far from complete.

from what follows that even these master-pieces of engineering, as they were when first driven through almost impenetrable forests, are in many places quite unsuited to the requirements of the cart traffic which has now set in upon them, and which with the altered physical condition above alluded to, coupled with other causes, threatens to render them entirely unserviceable, unless energetic measures be adopted for their preservation and reconstruction in places."

12. *Present extent of Coffee clearings.*—When, in addition to this, it is borne in mind that hardly a portion of Coorg, with the exception of Nalknad, remains unoccupied by planters; that clearings are going on towards Codlipett as on the north and on the Turican Ghât, in the north-west; that the whole hill sides of the Sumpagee Ghât have been cleared and planted; that the same has taken place at and near Mercara, extending miles to the eastward and along the Fraserpett Ghât road; that the lands about Seedapoor Ammathee and Anantipoor in the heart of Coorg are likewise under flourishing coffee crops; that within the last two years, for three miles down the Periambady Ghât, the hills on either side have been laid bare and planted; that clearings are commenced towards Tottamutty; and that Kiggutnad is being taken possession of, there can be no reasonable doubt the whole country will be the scene of European enterprise in a very short period; Coorg, in fact, forming with Munzerabâd on the north, and Wynaad on the south, a vast connected colony.

13. *A more extended system of roads requisite.*—It therefore appears to me perfectly clear that, even were the main roads above alluded to in thorough working order, they would only, in a very partial degree, meet the first wants of the country, and that an imperative necessity exists for devising some practical means of giving a more extended series of communications.

14. This would inevitably entail a very great increase on our present Public Works expenditure, and, above all, demand an increased and thoroughly efficient establishment. Believing, as I do, that there is no time to be lost in considering this question, and that some conclusion should, if possible, be arrived at before the next Budget is framed, I make no further apology for describing at some length the present state of works in Coorg, convinced that, however imperfectly the subject may be treated, discussion at least will be called forth, and more valuable opinions than mine elicited.

15. *Accompanying Map of Coorg.*—To facilitate reference, I have constructed the accompanying map from such information as I could procure. The Trigonometrical Survey shows only the old native tracks, and it may be doubted whether the topographical features are very correctly indicated. We have no actual surveys of the Ghât roads; they are, however, here, I think, sufficiently well laid down to answer my present object. The heights above sea-level have been determined from means struck on the observations of Reverend Mr. Richter, Mr. Stoddard, and myself; being, however, taken with the Aneroid, they can only be accepted as approximations.

16. *Longitudinal Sections of Ghât Roads.*—With reference to the condition of the Ghât Roads in regard to gradient and soil, I would invite attention to the longitudinal sections laid down on separate sheets. Though the slopes have been roughly laid down without the use of an

instrument, they will be found sufficiently accurate for all practical purposes, and show at a glance the weak points claiming early attention. A few observations on each would appear to be all that is required.

17. *Mercara—Fraserpett Ghât.*—First in the list is the Mercara—Fraserpett road, 19 miles. This is probably the most defectively traced line in the country, for it will be noted that, although there is only about 1,000 feet difference in level between the termini (giving an average fall of 1 in 100), there are two places between the 3rd and 5th miles with gradients of 1 in 9 and 1 in 10; and many others with 1 in 15 and 16.

18. The present condition of the steepest portions is most distressing. The longitudinal slopes being as great, or greater, than the side slopes, the water tears down the centre of the road, ripping up every thing but large boulders, and the surface repairs made from the trifling repair allowance, Rs. 150 per mile, are altogether useless.

19. *Geological structure, no gravel.*—The Coorg hills being composed of metamorphic rock in which felspar is largely present, all near the surface is decayed, and there is very little really good gravel to be procured; good gravel indeed appears only to be met with in laterite formations at a few points along the Tulla Cauvery road, also between Veerarajendarpet and Periambady, and again on the Bittengall road, with, perhaps, a few other isolated spots.

20. Metal is procurable either by blasting or from the embedded boulders met with in excavating the scarps.

21. While, therefore, presenting great facilities for the cutting out of roads, it is evident that very serious evils result from the geological structure of Coorg in regard to two of the main requisities of Ghât roads. The first is, that the foundation of the road must be soft and yielding, and that there is no proper top-dressing present for such metalling as may be laid down; the second, that the side scarps and other portions readily yield and fall away with the slightest run of water on the surface, there, in fact, being no coherence in the soil.

22. Mr. Stoddard is making every effort to metal some portions, but of course the means at his disposal are altogether inadequate, and even if he could succeed, it is evident, from the steepness of the gradients, that most of the metal must be swept away next monsoon, leaving the road as bad as ever, and at times, I am assured, it is wholly impassable for any kind of vehicle, which I can readily believe.

23. *New trace, upper portion of Ghât, required.*—To my mind, therefore, a new trace of at least all portions with gradients above 1 in 18, is a first necessity. The portion between Mercara and Soonticoopa being the worst, I would urge an entirely new line being made. My short stay in Coorg would not, of course, allow of my gaining more than a general impression as to how such a line should be run, but it appeared, from all I could see and gather on the subject, that there are at least two alternative lines open to us to choose from, both offering special recommendations.

24. The first is to adopt (and widen) the first 4 or 5 miles of the Mercara—Codlipett road, which only needs very slight rectification in two points as regards gradient, and connect this point with Soonticoopa by a short line of, I should think, certainly not more than 4 miles in

length. A double object would thus be obtained, namely, a minimum amount of expense in the construction of a new Ghât, and the attainment of the original object of the Codlipet road; which was to connect Soonticoopa, and not Mercara, with that place.

25. The second would be to carry a line west and south of the present one under what was lately Major Martin's estate, taking along the southern instead of the northern slopes of the spur leading down towards Soonticoopa.

As I shall have immediately to show that the 2½ miles of the Veerarajendarpet (sometimes called the Cannanore) Ghât, must eventually be given up, it will be observed by reference to the map that one good Ghât here could be made to lead alike to Soonticoopa and Veerarajendarpet, thus like the other alternative line serving a double object.

26. Without a most careful examination of the country, trial traces, levels, &c., it would, of course, be quite impossible to say what actual course should be adopted; I am, however, satisfied that, on all professional grounds, as also from the stringent orders issued by the Government of India in regard to gradients of Ghât roads (the maximum having been expressly limited to 1 in 22), no other conclusion can be arrived at than some such thorough reconstruction as I have ventured to recommend for the upper portion of this road.

27. *Retracing in lower portion of Ghât.*—Between Soonticoopa and Fraserpett, it will also be observed that there are in places very objectionable gradients. The adoption of zig-zags, or a slightly more circuitous route in one or two places, amounting, on the whole, to say, a reconstruction of 3 miles, should, I imagine, suffice.

28. In closing my notice about this line, I would observe that, in addition to other objectionable features, high jungle lines the road closely for several miles, chiefly in its lower portions, and if not removed at once by planters (the under-growth, of course, being left to preserve the surface), should be cut down to 15 yards on either side of the road.

29. Halting places for carts and cattle off the road should be provided, and stringent regulations enforced regarding their use.

30. Between the 18th and 19th mile-stones, the Cauvery flooded back last year, inundating two portions of the road from 4 to 8 feet in depth; the portions, however, being short, can be easily dealt with.

31. *Sumpagee Ghât.*—The Sumpagee Ghât, 19¼ miles in length, and leading direct to Mangalore, is the next line claiming attention. This great work, the first of the 14 or 15 roads now carried through the Western Ghâts, is undoubtedly the best in Coorg, and, so far as I can judge, only requires trifling rectification between the 9th and 10th miles. At the upper portion of the mile, the slope is 1 in 12, and for a short distance, approaching a bridge over a ravine at the 10th mile, as much as 1 in 6 or 7.

32. *Short portion should be re-traced.*—There is a deep narrow gorge at this point, which, no doubt, rendered the selection of a better line almost impossible, with the features of the neighbouring slopes shrouded in dense forest. Even now, with nearly all laid bare, it is no easy matter to choose another, and although, from my own personal examina-

tion, I am satisfied the line can be eased by a zig-zag taken through Mr. Steward's property, very careful work will be required.

33. At a rough estimation, I should say 1½ miles of new Ghât would have to be made.

34. It will be observed that, from about the 2½ to the 4th mile, there is a counter-gradient; this, however, was essential in order to get over the saddle on one of the lower spurs of the range running off towards Tulla Cauvery.

35. Mr. Stoddard has devoted a good deal of attention to this work, and done all that the limited funds at his disposal would admit. The Ghât is nearly metalled throughout, indeed, I might say, paved in its lower portion. The metal is staring and gritty, and I should fear would, in great measure, be swept away, if means cannot be found before next May for protecting it with gravel and a well-formed up roadway.

36. *Escarpment slips.*—The small bridge carried away at the 12th mile during the monsoon of 1863, has been fairly re-built. It has, however, no parapets, and the estimate is exceeded.

37. Several slips have occurred in this line, the most serious one being below the 10th mile-stone. This resulted, in a great measure, from the clearings both above and below the roadway, and though a passable road has been constructed across, some permanent arrangement must be made for diverting the upper drainage and leading it off to the stream below.

38. The side-cuttings in the 1st mile near Mercara are extremely heavy, one double escarpment being about 90 feet high, and the drop on the lower side of the road precipitous to a degree. Some thick growth should be encouraged here to obviate all possibility of a slip which, if it occurred, would be fraught with the most serious consequences.

39. Halting places for carts are also required in this Ghât.

40. The total fall in the first 15 miles of this Ghât is about 2,900 feet, which gives 1 in 97 for the whole line, but it will be observed that the influence of the counter-slope has prevented this being worked out. From the foot of the Ghât to the town of Sumpagee, 4½ miles, the fall is only about 55 feet.

41. *Veerajendrapett Ghât.*—The next Ghât in order of succession is the first 2½ miles of the road leading out of Mercara towards Veerajendrapett.

42. At the end of the 1st mile, and after passing the 2nd, the gradients are 1 in 9, and in nearly all other portions extremely heavy, so much so, indeed, that I would beg to recommend entire reconstruction.

43. *Marked example of effects of clearings above Ghât escarpments.*—The side-cuttings in the upper portion are also extremely heavy, and as this part, perhaps, affords the most marked example of the effects of clearings above Ghât roads, I herewith attach a rough sketch (*omitted*) I made of the 1st mile of this Ghât as seen from the Sumpagee.

44. Here, it will be observed, on the central hill, that the planter, to prevent the soil being washed away from his trees, ran the horizontal drains *a. a. a. a. a.*, but these becoming surcharged, burst at different points, forming the perpendicular channels *b. b. b. b.* at the end of each of which most formidable breaches have occurred.

45. These four slips in this short space are each, I should say, at least 100 feet high. It took several days with the utmost exertions to clear the road, and in two cases the breaches carried away the roadway itself, occasioning the most formidable chasms on the lower side. My own opinion is that, unless some thick growth be at once encouraged on this hill, the next monsoon will see these breaches greatly extended; in fact, there appears every likelihood of the original form of the hill being altered, and the work in preserving the road will be endless.

46. It will also be observed that, from the clearings on the left hill, numerous minor slips *d. d. d. d.* have occurred. Though, of course, not of the same magnitude from the smaller height of the scarp, nevertheless they assisted in dissipating the small road repair allowance at the disposal of the Assistant Engineer, and prevented his giving almost anything to the preservation of the road surface.

47. As a distinct proof that, to upper clearings alone are to be attributed nearly all the serious slips which have taken place, I would point to the present condition of the side-cutting mentioned in para. 38 (of which a rough sketch is attached) as also to the weathered, and apparently perfectly safe, condition of many other similar scarps where the upper surface of the hill has not been disturbed.

48. Every one passing through Coorg has been struck with the gigantic trenches, carried through deep valleys and along the tops of the highest hills, serving as ancient boundary marks (Kodungas). Some of these are nearly 40 feet from summit to bottom of ditch, and often taken along hill-sides with an angle of 80° to the horizon, yet, though hundreds of years old, the edges of most of them are as sharp as possible, spite of the natural incoherence of the soil. This simply results from the surface not having been ever disturbed.

49. The total fall in this Ghât is about 550 feet in 2¼ miles, giving 1 in 24 over all; there are, however, two short counter-slopes which has thrown out the remaining gradients.

50. *Periambady Ghât.*—The 4th and last of what may more especially be termed Ghât roads in Coorg, is that at Periambady, 10 miles in length, leading down towards Cannanore.

51. It will be observed from the section that, for the first 2¼ miles, the slope is sufficiently gentle, but for the ¾ of a mile just above the Wottacolly bridge there is a distressing gradient of 1 in 10 and 12. The road after this is easy and level in places to beyond the 5th mile, from which it drops down to Woority, with generally far too steep a gradient.

52. *Portion requires reconstruction.*—I have very little doubt that, by carrying the line along the southern slopes of the hill at Wattacolly, one-half, or at most two miles of new Ghât would overcome the objectionable gradient above the bridge. Now that the hill-sides have been laid bare and planted, it is easy to see that an alternative line lies in this direction, but when Captain Francis laid out the Ghât, so dense was the undergrowth, and vast the forest over-head, that no neighbouring feature of the country could be seen from below.

It was only, in fact, by lighting fires along the trace, and standing on a bare-topped mountain commanding the Ghât, that the direction, with reference to the adjoining ground, could be ascertained.

53. *Difficulties connected with lower portion.*—The alteration of the lower portion of the Ghât is a different matter. Though undoubtedly desirable, it is not easy to see how it could be effected. The point on the section named the Jemadar's Rock is, so far as I can judge, the top of a precipice of sheet rock, across the face of which, it having been found impossible to work, it was allowed to rule the gradient down to Woority. Once this point was accepted; I conclude there was nothing for it but to lay out the Ghât as it now exists, the hill-side along which it is carried being at far too steep a slope to allow of length being gained by a zig-zag.

54. I found the upper portion of the Ghât, where the gradients are easy, all in fair enough trafficable condition, and being metalled, but the evils of too steep a gradient were at once apparent lower down.

55. Previous to the Ghât Roads being taken over by this Department in 1862, the Madras Government had spent some Rs. 60,000 in metalling this line, but chiefly from steepness of gradient, the metal (unfortunately very thinly laid on, and placed on an imperfectly barrelled road) was almost wholly swept away, and only traces of it can here and there be observed.

56. *Actual condition of the road-way.*—In the first rough shaping of the Ghât, many boulders had been left, and others of a smaller size were probably thrown in from time to time to fill up the deep channels cut by the water tearing down the Ghât; its dreadful condition can therefore hardly be exaggerated.

57. I found that Mr. Stoddard had, with great exertion, picked out a great number of the boulders, and that efforts were being made to form up the roadway. My inspection being made in very heavy weather, was so far ill-timed that I found the roadway, thus newly formed up, converted by the continuous rain and traffic into a dreadful slough. It was with the utmost difficulty in fact that carts with two pairs of bullocks could pull through it. When dry, and this becomes well consolidated, the whole should be carefully metalled; but it is quite clear that, if real relief is to be given to the traffic, which on this Ghât is the heaviest in Coorg (attaining some 600 or 700 carts daily in the dry weather), a large body of laborers must be constantly maintained.

58. *Effects of clearings on lower side of Ghât Roads.*—In speaking of the Veerajendrapett Ghât, I have shown the effects of clearings above hill side scarps. The portion of this (the Periambady) Ghât already cleared shows in many places, on the other hand, the evils of clearing on the lower side of the road where the side-slopes are great.

59. When forming the original road-way, Captain Francis adopted a simple barrelled surface as in ordinary roads, thus throwing half the drainage over the hill-sides by small cuts (*a*) from the outer drain at every 30 or 40 feet, as roughly shown in the side section (*fig.* I.) The plan answered admirably in the former uncleared state of the hill-sides—fewer cross-drains being found necessary, and the thick vegetation on the outer slopes preventing the chance of the soil being washed away and breaches resulting.

60. The moment, however, the slopes were cleared of jungle, the whole condition of matters changed. The planter, to prevent the soil being

washed away from the lower slope, very naturally cut the longitudinal drain A in the annexed section (*fig.* II.); this unfortunately operating in undermining the bank, frequent breaches of the nature shown by the dotted lines have been produced.

61. The Assistant Engineer, to help out matters as much as he could, has been endeavoring to dispense altogether with the outer drain by raising the outer side of the road, and throwing the whole drainage into the inner drain, which, having thus double its previous work to do, required to be eased by new cross-drains at closer intervals; 52 extra cross-drains are, therefore, now in the course of construction, but the attendant difficulties are of a very serious character.

62. To obtain an out-fall for these drains, which shall be free from the chances of occasioning frequent breaches, seems very nearly an impossibility where the hill-side is laid bare, and unless very thick planting can be maintained down the sides of the channels, I do not see how the matter can be managed.

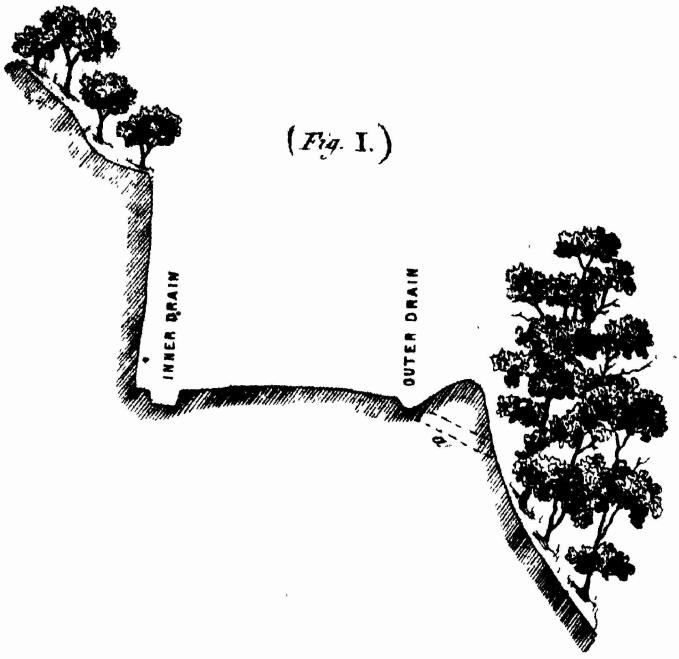
63. *Necessity for preserving low jungle above and below the road-way.*—For all at present uncleared ground along Ghât Roads, I would venture strongly to urge the necessity of preserving a belt of low jungle, both on the upper and lower slopes, of from 10 to 50 yards wide. Indeed, to ordinary observers it would appear to be quite as little in the interest of the planter as of Government to cultivate slopes which are so steep that the upper mould is easily washed off, and where, as is not unfrequently the case, such slips occur that plants and all are washed into the valley below. Hill-sides are now planted at angles of 45,° 50,° and even 60° to the horizon, when it would hardly appear possible to preserve for any length of time the surface soil in slopes of more than 20.°

64. *Impolicy of planting on too steep slopes.*—I am informed that it is the practice on steep slopes to plant the coffee trees closer together, but in any case the ground between must be kept clean and free from weeds, so that the evil is only very slightly mitigated.

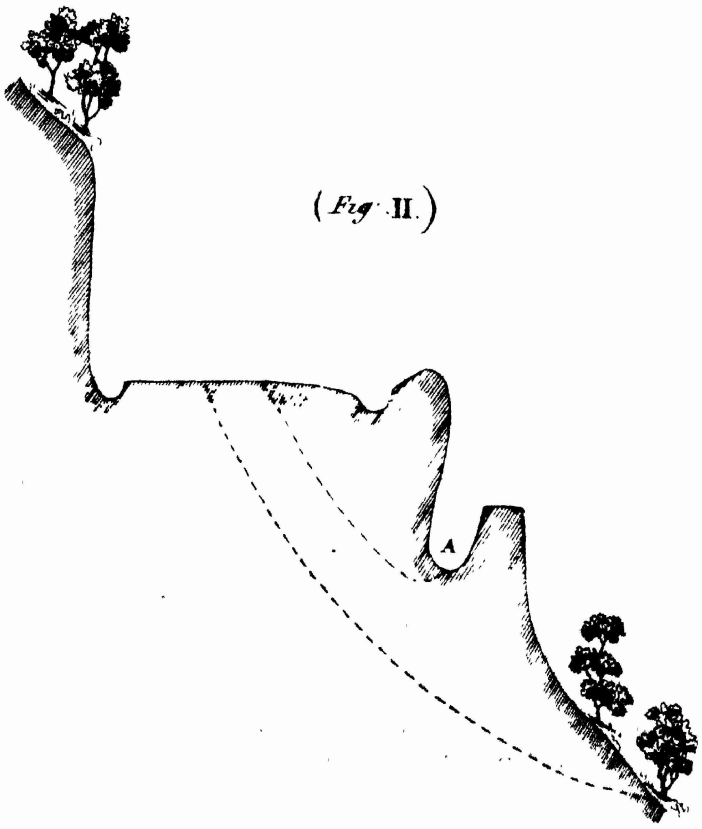
65. *Preservation of jungle on lower 7 miles of Ghât.*—There are now about seven miles of the Periambady Ghât to which my remarks especially refer, as the forest is as yet standing, and it is with regard to this I should be glad to see some decision arrived at. The slopes are extremely steep for the last six miles of the Ghât, and all along may be observed the noblest spars of Poon (*Calophyllum bracteatum*), Anjelly (*Artocarpus hersuta*), Chittagong wood (*Chickrassia tabularis*), Honay (*Pterocarpus marsupeum*), Sumpaigi (*Michelia champica*), Red Cedar (*Cedrela toona*), and many other timbers whose value on the coast is, I understand, rising daily, and which, therefore, it would appear most desirable to conserve.

66. *Departmental Officers should be referred to regarding clearings.*—Incidentally, also, I would beg to observe that, although it was ruled the Forest Department should alone decide as to the advisability or otherwise of permitting land to be cleared for coffee cultivation, some modification would seem to be called for in respect to forest land immediately adjoining roads or other works under this Department, a professional opinion regarding the effects of such clearings on public works being, in many cases, as I have endeavored to show, quite essential.

(*Fig.* I.)



(*Fig.* II.)



67. Like the other Ghâts, the Periambady requires the provision of proper halting places for carts and cattle; there will, however, be some difficulty in doing this between the 4th mile and Woority, all being hill-side cutting with no room to spare. From the 4th mile to the top, where I should think a good bazar might be established, the requisite arrangements can be easily made.

68. In many respects this Ghât was never turned out as a thoroughly finished road; large masses of rock remain to be blasted here and there, drains to be constructed, and the road-way to be formed and metalled.

69. The masonry bridge at Wottacolly, and the lately constructed timber bridge at Kakatoodoo, both require attention; but as they are not matters requiring the orders of higher authority, I shall, as with other individual cases, reserve them for special memoranda.

70. The three miles of road intervening between Woority and the Madras Frontier are nearly level; metalling is going on to some extent here, and I should hope the surface would ere long be in fair order.

71. *Extent of Ghât to be re-traced.*—In closing these remarks about the Periambady Ghât, I may state that the conclusion I have arrived at is that 1½ or 2 miles of new Ghât should be constructed above Wottacolly Bridge; the remaining 6 miles must be improved as far as possible (and very much can be done even as regards gradient in making repairs), but no re-trace for the present; lastly, that, as with these Ghât Roads, immediate measures should be taken for the thorough formation of surface, removal of boulders and rock, construction of the requisite drains, prevention of slips, &c.

72. *Other Main Roads.*—Having described at more or less length the Ghât portions of the through main lines of communication, I would beg to draw attention to the two connecting links, viz., the road from the foot of the Veerajendrapett Ghât to Periambady (21½ miles), and that from Periambady through Altor and Tittamutty leading towards Mysore (39½ miles to frontier).

73. As both these lines partake very much of the same characteristics, I may at once state that they are a perpetual series of rises and falls, being carried across low spurs of hills with intervening paddy flats.

74. The gradients are frequently very bad indeed, but being for the most part over short pieces, I would not suggest any rectification at present, draught cattle being able to make the needful exertion when the strain is not too continuous; metal, however, should undoubtedly be employed, and the form of the road better preserved. Felling of the high jungle on either side is also much needed in many places.

75. *Road embankments crossing paddy flats.*—The point, however, chiefly requiring attention in both roads is how to deal with the embankments crossing paddy flats, these having suffered most severely from floods during the last three years; these floods, as I have at the commencement stated, being, I believe, progressive in proportion to the extent of land cleared for planting, and liable, as has already been the case, to stop all communication by blowing up the bridges, &c.

76. These flats or cultivated Coorg Valleys present quite a peculiar section, the result, no doubt, of the incoherent nature of the soil before alluded to.

Instead of gently sloping off into the valleys, the hills terminate always in abrupt banks (A B and C D in the section, *fig.* III), which vary from 20 to 40 and 50 feet high, the stream shown at the left corner having probably wandered from side to side (*i. e.*, from B to D) much in the manner of the Ganges and other rivers of Upper India within the limits of their "Khadir." An irrigation channel taken off high up runs usually along the other side (D), and the stream, when surcharged, inundates a large portion, if not the whole intervening space. These paddy flats vary in width from 100 to 500 yards as a rule. Some, however, in South Coorg much exceed this, presenting magnificent sheets of cultivation girt by densely wooded hills.

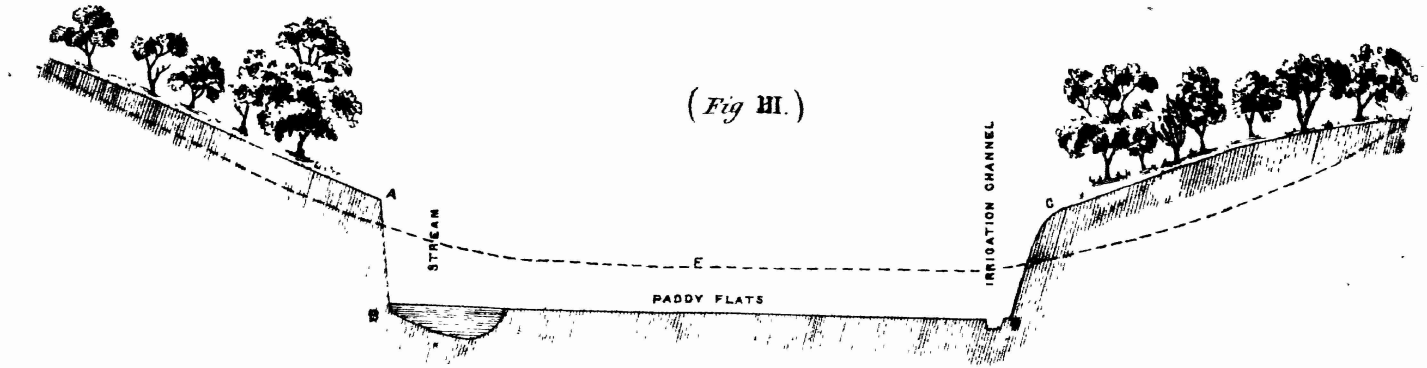
77. In carrying a road across such places (they are met at distances varying from half to two miles apart), the plan adopted was to throw an arch over the stream at B; also a tunnel for the irrigation channel at D, the road-way being formed in embankment somewhat as indicated by the dotted line in the section (fig. III). In the middle of this embankment at E was also constructed, as a rule, a small bridge for the discharge of surplus inundation water.

78 *Original mode of crossing now unsuited.*—These arrangements answered sufficiently well so long as the floods remained within their original bounds; now, however, that the tendency to increase yearly has shown itself in several cases, the irrigation drain at D, and in more cases, the small bridge at E have been blown up; five embankments crossing paddy flats between Mercara and Veerajendrapett have thus suffered during the past two years. In the early part of this monsoon, the Kokoloor Embankment, close to Veerajendrapett, was for the first time, since its construction (supposed to be 15 years ago), overtopped the flood, standing 4 feet above the small central bridge which it fairly blew up, transporting the whole of the materials to a distance of some 50 or 60 feet.

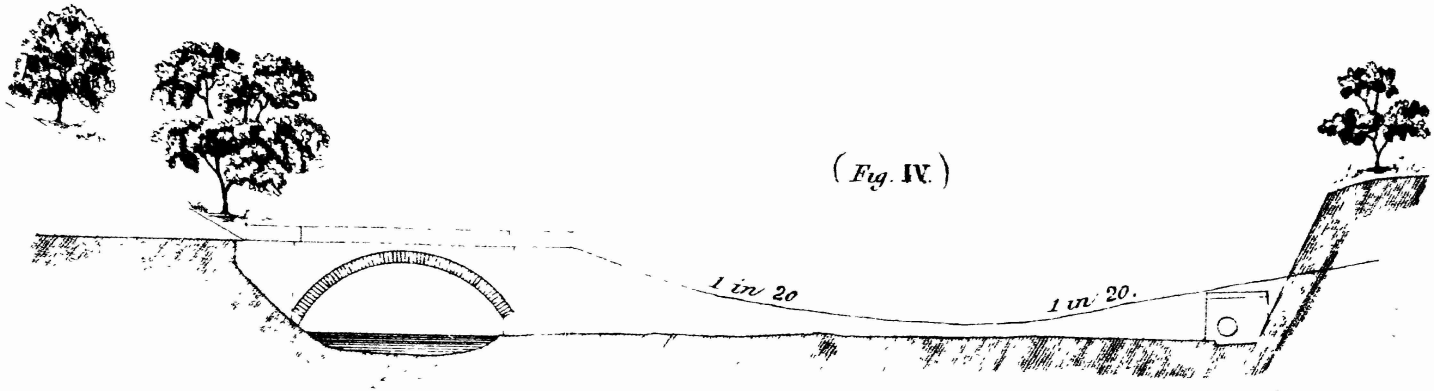
79. The bridge over the stream at B has always been saved by the destruction of the smaller one at E, the inundation water thus venting itself; but it is perfectly clear that, if we go on increasing the embankment to what we consider a safe height, and re-building the central bridges at E, considerable risk will be incurred of throwing too great a portion of the flood through B, and destroying these the main works; most of the latter are single-span bridges of 40 or 50 feet, were very costly, and frequently failed on first construction.

80. *Proposed method.*—In dealing with what, as I judge, has now become a gradually accelerating force, the first necessity is to provide for the safety of the bridges at B; I would therefore, instead of raising the embankment and re-building the bridge at E, cut down the former and omit the latter, making the whole assume the section shown in *fig.* IV, which, allowing the inundation after a few feet, rise to flow over the centre of the embankment.

There are only two essentials in dealing thus with the matter, viz., first, that the gradient of the approaches shown should be the maximum; and second, that the central point of the embankment should be kept as low as possible consistent with this.



(*Fig* III.)



(*Fig.* IV.)

81. I have every reason to believe that no flood would thus interrupt the communications more than three days at the furthest, and a few trifling repairs to earth-work would suffice after its retirement.

82. *Slope of bed of Cauvery River.*—Had the Cauvery River the same fall throughout the heart of Coorg that it has either above or below, even this duration of flood would not be experienced, but as I judge from the extreme sluggishness of the current both near Moornad and beyond Seedapoor, the fall throughout this portion cannot be more than six inches per mile. The Aneroid showed nearly one foot per mile, but I doubt the accuracy of the result.

83. The river was about 200 feet wide by 10 feet deep at Moornad, and about 300 feet wide by 7 feet deep beyond Seedapoor, and the total monsoon rise at both places was shown to be about 25 or 27 feet above the surface level (as I saw it), inundating the country to a great extent on both sides, and ponding back its several feeders.

84. I have given above the general mode of treatment I would recommend for the road embankments under the present altering physical conditions of the country. The estimates for the individual works being thus mostly confined to earth-work, will fall within the Commissioner's competence to sanction, and need not, therefore, be further adverted to here.

85. Besides the injury to works on the Veerajendrapett Road, I beg here roughly to note the condition of matters on that between Periambady and Anachowkoor.

86. *Works on the Periambady Anachowkoor Road.*—First small bridge met with on flat near Bittengal Wing washed away on one side; no parapets; submerged 2 feet last monsoon. Further end of same flat; another bridge submerged 4 feet; parapets washed away. Again, just beyond 34th mile-stone, another bridge submerged 4½ feet. The original construction of all the wings of these works was very defective, and these severe trials have strained them all, cracking and thrusting them outwards. Mr. Stoddard prepared estimates for dealing with all, and they were entered in this year's Budget, but the urgent calls for other works have interfered with their execution.

87. *Gonicopal Bridge.*—At the 28th mile-stone is the Gonicopal Bridge. The old work consisted of 2 arches of 23 feet span, and was washed away in July 1863. Various estimates were framed (most of them proving untrustworthy from rapid rise of labor rate, &c)., and now a design is fairly in hand for re-constructing the work with two timber trussed spans of 35 feet each; the estimate amounting to Rs. 26,660, of which Rs. 6,366 has been already spent. The east abutment is now 12 feet high with its foundation on rock, but the revised estimate being above the Commissioner's competence to sanction, the work must at once stop.

88. Mr. Stoddard has constructed a rough stone cause-way below the bridge, with a temporary road-way leading to it, thus keeping open the line for all but three months in the year. Even this, however, is a most

serious interruption, and I would urge the necessity of moving the Government of India for early sanction.

89. *Other Bridges.*—The Shegathodoo Bridge, 27th mile, two arches of 20 feet. Wings short, weak in section, unsupported and cracked; flooring and new cut-waters much wanted.

90. The Budragooloo Bridge, 24th mile, 36 feet segmental; north-east wing-wall gone altogether, and portion of arch carried away; opposite wing slightly cracked. This injury happened only quite lately, and Mr. Stoddard will at once submit an estimate for the repair which is urgently called for.

91. Further on, Mavinhulla Bridge, two spans of 27 feet, consisting each of four timber girders with struts. All rails gone; three girders require immediate renewal; masonry wings bulged and split.

92. The whole of this road is a succession of steep gradients, but being pretty equally distributed between ascents and descents, the cart bullocks can make the requisite exertion, and, for the present at least, with so many more pressing claims, I would not urge any re-tracing.

93. Metalling is required throughout, as the traffic is extremely heavy, and the natural surface (there being but little gravel to be had) quite unsuited. Several new cross-drains must also be constructed, and high jungle cleared from the side in many places.

94. *Veerajendrapett Bittengal Road.*—Having now reviewed the state of the main lines, I would beg, before passing to those under construction, or proposed, to advert briefly to the short line of three miles in length between Veerajendrapett and Bittengal, which was made a few years back with a view to save carts, coming from Mysore to the former place, the detour of eight miles round by Periambady.

95. There are three hills and as many paddy flats crossed by this line, the gradients of ascents and descents being fearful and quite impracticable for laden carts. The first bridge at Veerajendrapett has been carried away, as also that at the Bittengal end.

96. Mr. Stoddard proposed not only to re-construct those, but to build two other new bridges, and raise the embankments; it is, however, perfectly clear to my mind that the whole road has been so badly traced from first to last (it was, I understood, laid out entirely by a Sub-Overseer without supervision), that any alterations or improvements would be simply to throw away money. I would, therefore, leave this road as it is. In showing afterwards what other lines of communication appear to be required for Coorg, I shall advert to the subject.

97. *Mercara Codlipett Road.*—The road now under construction between Mercara, Somwarpett, and Codlipett, 41½ miles, was commenced some three years ago, and during last year had made such advance as to admit of carts going over it. Of course, however, the work is far from complete.

98. The original idea in thus connecting Munzerabad and Coorg was to run the line to Sonticoopah, but it was afterwards altered to Mercara as holding out greater advantages.

99. The estimate at present stands as shown in the margin, but labor has risen so much since it was framed that revision is requisite, and a considerable increase may be looked for. My impression is that this revised estimate will amount to Rs. 1,60,000, of which about Rs. 55,000 having already been spent, at least one lakh remains to be provided for in future Budgets. Rupees 20,000 is all that it has hitherto been found practicable to assign each year to the work, at which rate five years more would be required before it could be completed, and during this time nearly all other similar original work must be seriously hampered. Add to this the probability that a further enhancement of the labor rate will almost certainly take place, and I think myself justified in assuming, first, that, before proceeding to the full contemplated extent with this road, it is very essential to determine, as nearly as possible, its relative value compared with others which have been projected, and prevent, if necessary, its unduly absorbing all the funds available for the latter.

	Rs.
To road, including all drains and minor bridges, but including metalling	90,837
To the three bridges on the Choran Mahdapoor, and Hutty Rivers	36,303
TOTAL .	1,27,140

100. Though without the requisite information for determining this point, which of necessity requires the Commissioner's decision, I shall have to advert to it in treating of the bridges, and again in reference to general system of communications apparently required for Coorg. Meanwhile, as I have on a former occasion fully reported on nearly the whole of this work, a few brief observations on its present state will suffice.

101. *Present state of the works.*—The line having been laid out under stringent regulations in regard to gradient, and the trace receiving great attention, first, from Captain W. Campbell (then in charge of North Coorg), and second from Mr. Stoddard, the result is a road with uniformly the best gradients in this little Province.

102. There is a small zig-zag required at the saddle just after quitting the Mercara-Fraserpett Road, and before reaching Mr. Fowler's, about 1½ miles further on, another rectification of the gradient for a short distance is needed. With one or two other very trifling exceptions, I think the maximum gradient throughout the line as far as Somwarpett may be pronounced to be 1 in 18; 1 in 20 is common on the Ghât portions, and it varies from easy to level in several points.

103. In ascending the hill beyond Somwarpett, I fear the gradient is 1 in 16, but after that to Codlipett, 1 in 19 and 20 is the maximum; the line in most places being very easy, and often nearly level.

104. The whole descent from the highest point after just leaving the Mercara Road, I make to be 1,300 feet to the Hutty River, which is 9 miles off, so that this portion may be practically considered as forming a fifth Ghât. After this, the alterations in ascent and descent are pretty well divided.

105. Most of the road-way is 18 feet wide, there are places 16 feet, 2 others 14 feet, and even only 12 feet wide, but these form a small proportion, and I should think that in three months the full width will be

attained from first to last. Several minor bridges are now in hand by Contractors. Drains are being constructed, and altogether the work is progressing with very creditable activity, and were it not for the fact that Mr. Stoddard was compelled to entrust the conduct of this extensive work to lower subordinates (there not being an upper subordinate left in Coorg at the time of my inspection), I feel satisfied that even the minor faults I have pointed out would have had no existence.

106. None of three bridges forming the separate estimate for Rs. 36,303 have as yet been commenced, partly as the rates must be revised, and partly from the Budget limit for the year not being sufficient; my impression is that the revised estimate for them can hardly fall short of Rs. 50,000; there is, therefore, the more need to reconsider the grounds on which it is proposed to construct these works.

107. *Choranhully Bridge.*—For the Choranhully a simple timber trussed span of 50 feet is proposed; for the Mahadapoor 2 similar spans; and for the Huttyhulla 3 spans of 50 feet. All of these streams run eastward forming after their junction the Haringhy River, which joins the Cauvery a little above Ramasawmy Cunawai.

108. The Choranhully is narrow, and having a rapid longitudinal fall comes down with great force when in flood. A cause-way is, therefore, inapplicable, as also the maintenance of communication by means of a ferry; I see, therefore, no other course than to construct the bridge as proposed.

109. *Mahadapoor and Hutty Bridges not apparently essential.*—The Mahadapoor has already had a rough stone cause-way thrown over it which has perfectly withstood the last two monsoons. As it answers every purpose of cart traffic (the approaches to it are too steep and should be improved) for nine months in the year, and as further the communication during the remaining three is now maintained by basket boats (two wretchedly small affairs which should be replaced by a proper ferry-boat), I do not see any very urgent necessity for bridging the stream.

110. The same remarks apply to the Huttyhully, across which Mr. Stoddard is about to construct a cause-way similar to that at Mahadapoor.

111. Were the Mercara-Codlipett Road of that extreme importance to Coorg development that are either the existing trunk lines or others, whose claims the rapid changes daily taking place press for early recognition, I should hesitate in venturing to recommend the elimination of apparently such important works as the Mahadapoor and Hutty Bridges; but if it be for a moment considered that not only would the cost of their construction throw out whole lines of most needful road-work from future Budgets, but that the Cauvery beyond Moornad on the main road between Mercara and Periambady is at this moment unbridged, I think it will be admitted that there are good grounds for this course; at least I trust it will receive fair consideration. The joint cost of the two bridges would not be less than Rs. 40,000, and it will be immediately seen how important such a saving would be.

112. *Veerajendrapett-Siddhapoor Road.*—The next work of communication now under execution by this Department is the trace of the proposed line from Veerajendrapett viâ Ammuty and Siddhapoor to Fraserpett. The distances are 10 miles to Siddhapoor, 2 more on to

the Cauvery, and 16 from that along the left bank to Fraserpett, in all 28 miles. The whole has been capitally traced by Mr. Stoddard, who has sectioned it as far as Siddhapoor, and will soon have the estimate for the complete road prepared thus far.

113. It would cost but little to open the line as a fair-weather cart-road to Siddhapoor, and I am given to understand that the old Native track thence to Periapatam would, with very little touching up, answer the same purpose.

114. Of course, like all Coorg Roads, the trace from Veerajendrapett to Siddhapoor is up and down hill, and crosses paddy flats at every one or two miles. I found, however, the gradients all very fair, the only real difficulty being in, and immediately leading out of, the town of Veerajendrapett itself. Within the limits of the town, the main streets of which have gradients of 1 in 10, it has been found necessary to bring in the new line from the Mercara Road, and then take it by a Zig-zag up the face of a hill to the east and over a saddle. Mr. Stoddard's longitudinal section with his Report will, however, satisfy all requirements as to gradient, &c.; I shall merely, therefore, here allude to the point lately much mooted as to the direction the road should take on leaving Siddhapoor.

115. *Further extension of the Siddhapoor Road.*—The first question raised was whether the line should be carried along the right or left bank of the Cauvery to Fraserpett, at which place the fine bridge, built by Colonel Green, spans the stream.

116. The left bank line, while involving a crossing of the river near Siddhapoor, was found to pass through a rich country and numerous villages, to whom a road for exporting their produce is a matter of the utmost importance. The right bank, while refusing the river and thus saving the expense of a crossing, went through a jungle without a hut in it. There could, therefore, be little doubt as to which should be preferred.

117. Strong claims, however, have been preferred as to the desirability of constructing a cart-road from Siddhapoor to Periapatam in Mysore, the ground being favorable, and the line itself being of the utmost importance to the rapidly rising European interests now centered in Ammuty, Siddhapoor, and Anantipoor.

118. To determine between the relative merits of these alternative lines would be a matter of some difficulty, and in any case beyond my province; but as they appear to me well worthy of consideration, I shall include them both in the general scheme for communication to which I shall shortly refer.

119. *Mercara Tulla-Cauvery Road.*—The last road inspected by me, and which may be considered under construction, is that leading from Mercara to Tulla-Cauvery to the temple, at which place, as the fountain head of their sacred stream, all true Coorgs make a yearly pilgrimage in October. The original idea in making this line was to devote the proceeds of income tax raised in the Province to an object which should be pleasing to a loyal people. There are clearings moreover, I believe, going on on the Turican Ghât and other ground in this direction likely

to be taken up for coffee, so, although subordinate to the original idea, there may be some utility in this line, which, if requisite, could be carried on to Sooleah on the Mangalore Road.

120. The line had been originally traced very rapidly during the monsoon with all its attendant difficulties; it is therefore not surprising to find that much had to be rejected by Mr. Stoddard on inspection. The line starts from about the 2nd mile-stone on the Sumpajee Ghât, and running down left through the important village of Talutmoney, ascends and traverses the northern slopes of a hill facing Koputty Peak, all in rather steep hill-side cutting. The ascents and descents are pretty fairly divided till the old Native Tulla-Cauvery Road is struck at Bamgoor Hobly Cutcherry, from which place to Bagamungalum (situated at foot and 3½ miles from the hill on which is the temple) this old line is pretty well followed, much in fact of it being used in the new. The whole of this portion is of course very undulating, but it can be worked out without any very serious gradient.

121. The total distance from starting point on the Sumpajee Ghât may be taken as 22 miles (or 24 from Mercara), and a Contractor is now cutting out the road to an uniform breadth of 10 feet for Rs. 250 per mile. I found that about one-third of the work had been executed; but several rectifications of trace being still needed, I was induced to recommend a cessation of work for the present to the Superintendent under whose immediate orders it is progressing, at least till Mr. Stoddard was enabled to go again carefully over the whole.

122. *Description of road required and extension to Sooleah.*—There is no doubt that a very fair foot passenger and pack bullock line, which appears to be all that is wanted, can be opened up to Bagamungalum for Rs. 6,500, and afterwards the extension to Sooleah over the Turican Ghât, as recommended by the Superintendent in his last Administration Report, could be arranged as roughly shown on the Map, the line being taken off a few miles east of Bagamungalum to avoid heavy gradients in crossing the intervening valley.

123. *Roads made by private parties.*—In addition to the roads designed and carried out from imperial funds, others are now being constructed by planters from their own private means. Though not having personally inspected these, and thus unable to offer any accurate information regarding them, I think it only right to place on record, however imperfectly, the facts connected with this new and encouraging element of advance, and have, therefore, shown roughly on the Map the direction of two of the most important of the lines in question.

124. *Accommodation for travellers in Coorg.*—In concluding my notice of existing works of communication, I beg to draw attention to the following Table showing the present state of accommodation for travellers in Coorg with their requirements.

Places provided with Travellers' Bungalows.	Class of Bungalow.	What Out-houses are attached	Other accommodation at same place.	General remarks on present state and requirements.
Fraserpett ..	2nd Class	Has stables, cook-rooms, &c.	Moosafirkhana and Soldiers' Shed	All buildings in fair order.
Santicopah ...	3rd ,,	Cook-room, but no stables ...	Ditto ...	All in pretty fair order. Stables much wanted.
Mercara ...	2nd ,,	Cook-room, stables, &c. ...	Ditto ...	The Moosafirkhana temporarily used for Civil Dispensary, and Soldiers' Shed as cook-room to it. They will soon revert to their original use. Bungalow floor a little broken, and wants cleaning; will soon be put to rights.
Mudenad ...	3rd ,,	No out-buildings ..	Ditto ..	Moosafirkhana out-offices thatched, and should be tiled. This bungalow is wrongly placed, being much too close to Mercara.
Moornad ...	2nd ,,	Cook-room and stables ...	Ditto ...	Bungalow, cook-room, and stables all leak very much and require thorough repair. Soldiers' Shed ditto. The Moosafirkhana is in fair order
Veerajendrapett ..	2nd ,,	Ditto ...	Ditto ..	Bungalow capitally situated, and is in good order. All other buildings in fair repair.
Wottacolly ...	2nd ,,	Ditto ...	Moosafirkhana, no Soldiers' Shed ...	Tops of verandah pillars in bungalow nearly all cracked by brestsummers, roof gets easily saturated, and then drops all over; building requires thorough repair, and an iron roof. Moosafirkhana new with iron roof appears to answer well. Old Soldiers' shed fallen down.
Attoor ...	2nd ,,	Ditto ...	Ditto ...	All in good order.
Tittamutty ...	2nd ,,	Ditto ...	Ditto ..	Bungalow roof leaks, ditto out-houses; tile turning, &c., required. Moosafirkhana and Soldiers' Shed both require repair.

125. It appears to be generally admitted that of the above Bungalows, that at Mudenad, 4 miles down the Sumpajee Ghât, is quite useless, being much too close to Mercara. If it were sold off and a small iron-house placed at Wottacolly, 11 miles down the Ghât, all the requirements of the travellers would apparently be met, there being a good Bungalow at Sumpajee.

126. Stables are much required at Santicopah, shelter being an essential with the trying Coorg monsoon. I would also urge the desirability of providing fire-places in each Bungalow, travellers being now subjected to much inconvenience for want of them, and the buildings remaining extremely damp throughout several months of the year. The Mercara Bungalow is the only one which has a fire-place at present.

127. *Extended communication urgently required.*—Having now shown generally the condition of the existing works in Coorg, and what rectifications are urgently called for, I now turn to a matter of very nearly equal importance, namely, the communications needed to keep pace with the rapid spread of European enterprise in nearly every part of the Province, taking, as my starting point, the observations of the Superintendent contained in paragraph 61 of last year's Administration Report marginally quoted.

Para. 61 of Coorg Administration Report for 1864-65.
"I have also proposed that the Mercara Tull Cauveri Road should be carried on to Sooleah on the existing road to Mangulore. This extension would open out the slopes of the Western Ghâts for coffee cultivation. This line should also be connected with Veerajendrapett by a cross-road along the valley of the Cauvery past Nalknad, and it has already been recommended that the main road should be extended from Veerajendrapett to a point near the Brumaghiri Hills on the Waynaad Frontier, by which Coorg and Waynaad would be placed in direct communication with each other. I cannot urge too strongly on the Government the necessity of carrying out these roads."

128. *Sooleah-Bagamungalum and Nalknad and Veerajendrapett Roads.*—The Bagamungalum Sooleah Road has already been sufficiently alluded to. That proposed from Veerajendrapett viâ Nalknad to Bagamungalum would, if added, open up probably the finest forest land in the country, and with the Sooleah Road supply a through independent western communication, valuable alike for commercial and administrative purposes.

129. *Veerajendrapett-Waynaad Road.*—The next line, namely, that proposed from Veerajendrapett to Waynaad, would, I presume, lead, as I have roughly shown on the Map, through the town of Kiggetnad. Having rejected the present Veerajendrapett Bittengal Line from our list of roads (see paragraph 96), I would recommend that advantage be taken of this new proposed line to Kiggetnad to open an entirely new road over this portion, trending more to the east where the lie of the ground appears favorable.

130. *Kiggetnad and Tittamutty Road.*—From all that I can gather, it would appear that in addition to this direct connection with Veerajendrapett, Kiggetnad would equally need a line leading eastward towards Mysore, joining the Anachunkoor Road at some such point as Tittamutty.

131. *Fraserpett-Soonwarpett Road.*—The Siddhapoor, Fraserpett, and Siddhapoor Periampatam proposed lines have already been sufficiently adverted to (paragraph 112); it only, therefore, remains to note that from Fraserpett to Soonwarpett on the Mercara-Codlipett Road. The necessity for this road has long been urged; I have therefore roughly shown on the Map the direction it would take.

132. *Total length required.*—The lengths of these several district roads may be assumed roughly as follows :—

	Miles.
Sooleah to Bagamungalum	18
Bagamungalum to Nalknad	15
Nalknad to Veerajendrapett	15
Veerajendrapett to Kiggetnad	13
Kiggetnad to Waynaad Frontier	24
„ to Tittamutty	15
Siddhapoor to Fraserpett	18
„ to Periapatam	18
Fraserpett to Soonwarpett	20
TOTAL ...	156

133. To attempt to open these as fully bridged cart-roads, even without metal, would certainly not cost less than the average of the Mercara-Codipett Line, which, at the revised* estimate rates, gives over Rs. 3,500 per mile, or a total of Rs. 5,46,000, which, with the more urgent calls for rectifying the defective Ghât Roads and other engagements, renders it impracticable to aim at this high standard. The main object, which is to execute these works at once, would moreover be defeated.

* Revised Estimate, Rs. 1,60,000 for 44¼ miles.

134. *Roads to be suitable for Pack Bullocks.*—After giving every consideration to the subject, I am satisfied that the real wants of Coorg would be met by a system of roads suitable to pack bullock traffic, but traced with such care and deliberation that they can be individually worked out to cart-roads the moment funds can be spared.

135. Such roads, three yards wide everywhere, with log bridges, maximum gradients on all straight portions of 1 in 19, and at all bends, &c., of 1 in 22, and having cause-ways over the largest streams, could, I am satisfied, be opened. Rupees 600 per mile, allowing the whole net-work to be executed for Rs. 93,000, or if the work is to be done in four years, requiring an assignment of say Rs. 25,000 per annum in each successive Budget.

136. Very little more than the actual tracing would, I think, in practice, fall on this Department, as I have no doubt the planters would find it for their own interest to take certain lengths of line in their neighbourhood upon contract and work them out by estate coolies. Nay more, I should think they would be perfectly willing to do the work at once if guaranteed re-payment by Government within the specified four years. However, this is a question they can better answer for themselves. It is clear that for them to do the work would disturb the labor market less than if we did it, and being all of a simple nature, and precisely similar to work done every day on an estate, I think it would be found to answer.

137. The Executive Engineer should of course alone lay down the trace and specification for the work, naming the terms, and exact the strictest adherence to all on penalty of non-payment. The interests of all parties, it seems to me, would thus be met.

138. *General summary of cost for all roads.*—Having thus stated at length the works urgently called for, I beg to summarize the cost of the same, premising that all actually new portions of Ghât fully bridged and metalled will not cost less than Rs. 8,000 per mile. The original works to be entered in future Budgets would then stand somewhat thus:—

139. *First*, on Mercara-Fraserpett Ghât, there would be 3 miles (paragraph 27) to re-make on lower portion, with four more above, if the connecting Ghât be made between Santicoopah and the Codlipett Road (see paragraph 24), in all 7 miles, to which, adding at least 3 miles for an entire retrace of the Veerajendrapett Ghât (paragraphs 42), we have a total of 10 miles. On the other hand, if the new line be taken as indicated (paragraph 25), there would probably be 12 miles to re-construct. To be on the safe side, I shall adopt this latter length in calculating probable outlay.

On the Sumpajee Ghât, 2 miles of re-making are shown to be requisite, and the same on the Periambady Ghât, or total for all Ghâts, say, 16 miles. The probable cost of this would be $16 \times 8{,}000 =$ Rs. 1,28,000.

140. If the Codipett-Mercara Road is to be finished without the Mahadapoor and Hutty Bridges (paragraph 109 and 110), the amount remaining to be expended will be about Rs. 50,000, and the cost of the Veerajendrapett-Siddhapoor Road may with bridging be roughly assumed at (miles $10 \times 3{,}000$) Rs. 30,000; total Rs. 80,000. The Mercara Tulla-Cauvery Road being provided from income tax may be left out of consideration; the total probable outlay for roads in Coorg would then stand thus:—

	Rs.
To 16 miles of Ghâts re-made	1,28,000
„ District Roads now in hand	80,000
„ 156 miles of roads suitable for pack bullocks ...	93,000
TOTAL ...	3,01,000

which, if the work be distributed over four years, would require a yearly assignment of, say, Rs. 75,000 in the Budget.

141. *Additional works to be provided for.*—But in addition to the roads, there are bridges absolutely required to be either built or re-constructed, such, for instance, as the Moornad Bridge over the Cauvery, on the Veerajendrapett Road, which cannot be estimated at less than Rs. 60,000; the Gonicopaul Bridge (paragraph 87), Rs. 26,600, and several other minor but most important works If, therefore, the programme I have attempted to lay down be adopted, the entry for the next four years under Original Works, Communications, would certainly not be less than one lakh.

The Cauvery at this point being 200 feet wide, the cost at 300 feet per foot forward would be $200 \times 300 =$ Rs. 60,000.

142. The original works under other heads, for instance, Jail, &c., could not be much less than Rs. 20,000, bringing the total of part 1 to Rs. 1,20,000.

143. *Future Repair Charges.*—As regards Repairs, I have drawn up the following Statement of requirements after considering every point

with Mr. Stoddard, who has already submitted a complete analysis of rates to the Central Office:—

I.—Whole line from Fraserpett viâ Mercara to Sumpajee, 40 miles, to be metalled throughout in four years, and 10 miles to be subsequently metalled each year in succession. The metal to be laid 12 feet wide, and 6 inches in consolidated depth throughout.

By Mr. Stoddard's analysis, the cost of this will be Rs. 4 per cubic yard.

	Rs.
Cost, therefore, of 10 miles per annum	46,932
To repairs of surface for the remaining 30 miles @ Rs. 350 per mile	10,500
To clearing drains for 40 miles, removal of slips, &c., @ Rs. 150	6,000
Total ...	63,432

II.—Mercara to Periambady viâ Veerajendrapett, 24 miles.

(*a*) Ghât portion to have one-fourth of length metalled each year, cost at above rate	2,816
To surface repairs of 2 miles, at Rs. 350	700
To clearing drains, slips, &c., „ 150 for 2½ miles ...	375
Total ...	3,891
(*b*) Remaining portion 21½ miles, no metalling being at present proposed, the surface repairs, clearing drains, &c., may be taken at Rs. 300 per mile, or in all	6,450
Total for the whole line ...	10,341

III.—Whole line from foot of Periambady Ghât to Anachowkoor.

(*a*) 10 miles of Ghât to have metal renewed every three years (this is absolutely essential) or 3·3 miles each year.	
Yearly cost of this at Rs. 4 per cubic yard	15,640
Surface repairs of 6·7 miles at Rs. 350	2,345
Clearing drains, slips, &c., at Rs. 150 per 10 miles ...	1,500
Total for the whole line ...	19,485
(*b*) For 21 miles between head of Ghât and Anachowkoor + three miles at the foot between Woority and Koothully = 24 miles, yearly cost metalling quarter of this at same rate ...	28,160
Surface repairs for 18 miles at Rs. 350	6,300
Clearing drains, slips, &c., for 24 miles at Rs. 150 ...	3,600
Total ...	38,060
or total yearly charge for repairs of the whole 34 miles of road	57,545

IV.—Repairs to bridges and masonry works throughout Coorg, yearly charge, say	15,000
V.—Repairs to Bungalows, Moosafirkhanas, Rest-houses, &c. ...	3,000
VI.—Repairs to Civil Buildings	5,000

ABSTRACT OF ABOVE.

	Total Rs.
Head I	63,432
„ II	10,341
„ III	57,545
„ IV	15,000
„ V	3,000
„ VI	5,000
Total proposed yearly charge for Repairs ...	1,54,318

144. I have gone most carefully into the requirements of the several roads, and am fully of opinion that this amount must necessarily be spent yearly in the manner indicated if the works are to be maintained in proper order; being, however, perfectly aware that the charge would be considered out of proportion if thrown entirely upon the Coorg Revenues, I shall endeavor to show what proportion of the charge might fairly be borne by Madras and Mysore.

145. *Charges to be shared by Madras and Mysore.*—At the transfer of the Ghât Roads from Madras to this Department in 1862, the Commissioner strongly urged that a portion of the charge should be borne alike by Mysore and Madras, "both of which benefitted by these through roads as much as Coorg itself," and in his letter to Government, No. $\frac{589}{65}$ of 29th April 1864, he again reiterates the argument, showing "that the then Coorg income was quite insufficient, unassisted by imperial contributions, for the maintenance of two main Ghât Lines, those, namely, of the Sumpajee and Periambady Ghâts." Again, in the last Administration Report, the Superintendent observes—"It must be borne in mind, in considering the requirements of the Province, that Coorg is comparatively a narrow strip of country through which run some of the most important communications to the Western Coast. It would, therefore, be but reasonable to expect Mysore and Madras to contribute towards the maintenance of those Ghât Roads which now swallow up the greater portion of the available funds."

146. With reference to this point, I would also beg to quote a few sentences from an able and suggestive article on "the Southern Ghâts", No. LXXVI of the *Calcutta Review* for 1863, showing the advantages secured by Madras from the works. The Reviewer observes—"we have stated above that in 1853, the Madras Commission on Public Works found that the roads of Canara were returning to Government a net profit of 20 per cent. from the two sources of Land and Salt Revenue; we shall now take the ten years from 1851 to 1860, and show what has been the progress from about the last year on which the Commission founded its Report to the last at our command. Omitting all fractions below a quarter of a lakh, we find that the import trade rose within the above period from 4½ lakhs to 25½ lakhs. The value of exports rose from 30½ to 102¼ lakhs; thus the whole trade increased from 34¾ lakhs to 127¾ lakhs. In the same period, the Salt Revenue rose from £14,000 to £31,000, that is to say, was more than doubled," and more in the same strain.

147. Since this remarkable statement was made, the spring which has been given to enterprise in Coorg has mainly taken place, and if we could only analyse the returns, the direct gain by Madras would, I am satisfied, be shown to be equal to the whole demand I have ventured to claim for the Public Works in Coorg.

148. *Proposed distribution of charges.*—I would therefore now beg to propose, for the decision of higher authority, whether, taking all the circumstances into consideration, it would not be just to distribute the above maintenance charges as fallows :—

		Rs.
Amount chargeable to	Madras ...	50,000
" "	Mysore ...	50,000
" "	Coorg ...	54,318
	TOTAL	1,54,318

Also that the toll-gates now placed within the Madras Territory at Sumpajee (foot of Mangalore Ghât) and at the Irity Bridge (below Cannanore Ghât) be removed within the Coorg Frontier.

In Proceedings of the Madras Government, No. 1997 of 29th October 1861, the Secretary observed regarding these tolls—"the proceeds of these will of course belong to Madras, which provides the funds required for the roads;" it must, therefore, have arisen from some oversight that they were not transferred to Coorg, which, since the transfer, has provided all the funds.

149. *The required Establishment.*—The next point to be considered is that of Establishment. Mr. Bowring's remarks in the last Administration Report show clearly the difficulties under which we have labored in this respect, and the inadequacy of the present Establishment to supervise even the limited expenditure hitherto undertaken. Should the programme that I have ventured to propose be adopted, it follows that a very considerable increase under this head must be looked for.

150. With 16 miles of new Ghât to be traced and estimated for, 156 miles of other new road to be laid out in a mountainous country, there is in reality enough work for six Officers, but I should hope that, *first*, by a relaxation on the part of Government of the present stringent rules in the matter of estimates in regard to the "pack bullock" roads I have proposed, and *second*, by the hearty co-operation of the gentlemen forming the Coorg Planters' Association, we could get through the work with half that number; I would only, therefore, now ask for an Establishment consisting of one Executive Engineer, two Assistants, four Upper and ten Lower Subordinates, with suitable Office Establishments.

151. The budgeted charge for this Establishment would then stand somewhat as follows:—

	Per mensem.	Total.	Charge per annum.
Engineer Establishment.	Rs	Rs.	Rs.
1 Executive Engineer, 4th Grade	500		
1 Assistant ditto 1st do.	400		
1 Ditto ditto 2nd do.	300		
		1,200	14,400
Upper Subordinate Establishment			
1 Supervisor, 2nd Grade	150		
3 Overseers do.	240		
		390	4,680
Lower Subordinate Establishment.			
4 Sub-Overseers, 1st Class, 2nd Grade, at Rs. 50 .	200		
4 Ditto ditto 3rd do. do 40...	160		
2 Ditto 2nd Class, 1st do. do. 35...	70		
		430	5,160
Petty Establishment.			
20 Lascars at Rs. 8	160		
		160	1,920
Office Establishment.			
20 Clerks, varying from Rs. 70 to 15	500		
10 Peons at Rs. 7	70		
		570	6,840
Travelling allowances	800		
Office Expenses and Contingencies ...	200		
		1,000	12,000
Total Annual Charge Against Budget ...			45,000

152. *Proposed Budget for* 1866-67.—Large as this establishment charge may at first sight appear, the percentage is really only 13½ on the total of the Budget, which, under the recommendation I have made, would exhibit the following items as compared with the charges of the current official year :—

Classification	Proposed Budget for 1866-67	Budget of 1865-66.	Total. 1866-67	Total. 1865-66.
Original Works.	Rs.	Rs.	Rs.	Rs.
Military	0	0		
Civil Buildings	20,000	1,500		
Agricultural	0	0		
Communications	1,00,000	57,150		
Miscellaneous Public Improvement ...	10,000	0		
	1,30,000	58,650	1,30,000	58,650
Repairs.				
Military	0	0		
Civil Buildings	5,000	1,000		
Agricultural	0	0		
Communications	1,49,318	16,850		
Miscellaneous Public Improvement ...	0	0		
	1,54,318	17,850	1,54,318	17,850
Establishment			0	21,500
Tools and Plant			5,000	2,000
Total amount of Estimate ...			3,34,318	1,00,000
Net Increase			2,34,318	

of which one lakh would be chargeable against Madras and Mysore conjointly.

153. In proposing this greatly enhanced outlay, I have endeavored to show at length the grounds on which I have acted, yet I feel some further justification is called for, which, although beyond my strict province as an Engineer, I trust I may be excused for urging.

154. *Financial grounds.*—The total of Coorg income, as shown in the last year's Administration Report, was Rs. 4,68,824, and excluding the cost of the Regiment at Mercara, which, from the Superintendent's remarks it appears doubtful, was intended to be charged against this small province, the total expenditure was Rs. 3,01,441.

It follows, therefore, the increment in the Budget as proposed by me (2,34,318—1,00,000 borne by Madras and Mysore), or Rs. 1,34,318, would actually have been met last year, and an equilibrium in the finances established. When, however, it is considered that now the new acreage charge on coffee lands is to be introduced, and that each year will see great additions to the revenue (I am informed that the revenue will probably be doubled in two years), there would appear to be every reasonable hope that, spite of the great increase I have proposed in the charge for Public Works, there will still be a large surplus.

155. I would here most willingly close this Report, which I feel has already extended beyond all reasonable limits, but without some remarks on the subject of labor, Upper Subordinates, and travelling allowances for Coorg, my task would be incomplete.

156. *State of the labor market.*—First, in the matter of labor, there are extreme difficulties. During the monsoon, when the Ghât Roads require close daily attention, hardly a man is to be had. Mysore coolies, who all belong to the agricultural class, have by that time mostly vanished, or find easier and more congenial work on the coffee estates, where each man, in addition to his 4 annas per diem, can turn a few annas by sale of fire-wood, &c. Mapillay coolies, who require Rs. 10 per mensem, will only work in the low country at foot of the Ghâts. Madras men will again only work on the Periambady-Anachowkoor Road, salt fish being easily procured there, &c.

157. The extreme unhealthiness of portions of the Ghâts also frightens labor away from our works. Not a single cooly could at times be induced to go down the Sumpajee Gât in the monsoon. Many years ago Captain (Major General) Frederick Cotton proposed to establish single cooly huts at every mile, but this, as well as other similar attempts in the same direction, have failed signally. Mr. Stoddard has, however, now, with the sanction of the Chief Engineer, commenced the construction of permanent cooly lines at convenient distances, and in comparatively healthy localities. Nine of these now in hand are shown on the Map. A small hut attached answers for the Road Overseer. This system certainly holds out fair hopes of success, but still labor must remain precarious and expensive, all coming as it does from a distance.

158. Shortly since it was conclusively shown that the lowest rates of cooly labor were as follows:—

East and North Coorg.			West and South Coorg.		
	Rs			Rs.	
Men Coolies	... 6	per mensem.	Men Coolies	... 7	per mensem.
2nd Class	... 4½	„	2nd Class	... 5	„
Women and boys	... 3½	„	Women and boys	4	„
Duffadars for 30 men	15	„	Duffadars for 30 men	18	„

and these rates are with the more universal demand continuing to rise.

159. *Departmental Subordinates.*—As regards Departmental Subordinates, partly from the unhealthiness of many portions of their charges, coupled with hardships of no ordinary kind to which they are exposed, and partly from their being mostly young men unaccustomed to self-restraint, &c., the result of our three years' trial has been most disheartening, as will be shown by the following Statement showing the fate of all those employed up to this time:—

List of Upper and Lower Subordinates employed in Coorg from 1863.

Rank and Names.	Date of Appointment.	Date of Removal, &c.	Period during which employed.		Remarks.
			Yrs.	Mths.	
Upper Subordinates.					
Mr. M. Plumbe, Temporary Asst. Overseer ...	4th March 1863 ...	31st January 1864 ...	0	11	Dismissed.
„ J. Vassilian, Supervisor	22nd October „ ..	6th December .. .	1	3	Re-transferred to Bengal.
Corporal J. Telford, Overseer	6th June 1864 ...	15th January 1865 . .	0	8	Removed to Chituldroog on account of sickness.
Mr. R. T. Scaldwell „	29th September 1864	28th February	0	5	Deserted.
„ R. A. Harman, Temporary Overseer ...	1st February 1865...	12th June	0	4	Resigned.
„ G. Thomson, Overseer	1st March	26th August	0	6	Removed to Bangalore, sick.
Sergeant J. Mitchel, Overseer	28th May	... ...	...	...	Dismissed the Department.
Sub-Conductor Scully	1st August „ ..				
Lower Subordinates.					
Mr. C. Lloyd	11th May 1864 ...	18th July 1864 ...	0	3	Died.
„ N. Handibo	29th September 1864	31st January 1865 .	0	4	Sick and permitted to resign.
„ J. McIntyre	7th January	31st May 1864 ..	0	5	Resigned.

160. It is needless to say that most of Mr. Stoddard's time has been taken up first in endeavoring to train these men, and then in correcting the utter confusion resulting on their successive failures, all of which has necessarily engendered a very decided feeling as to the desirability of endeavoring to substitute other than Europeans for this class.

161. *Coorg Subordinates.*—At the Commissioner's suggestion, Coorgs have been employed as Road Overseers, and although want of the requisite acquirements on the part of these men unfits them for the post of Upper Subordinates, it affords me great pleasure to state that, in all other respects, the experiment is most successful. Naturally a truthful manly race, they discharge their duties faithfully, and possessing local influence, which is denied alike to Europeans and Natives of other parts of the country, they promise well for the future.

162. I took the opportunity of examining Mr. Richter's head-class when at Mercara, and found the lads had got a fair knowledge of algebra as far as simple equations, wrote English fairly, had also acquired some knowledge of practical geometry and mapping.

163. Mr. Richter, who had so long an acquaintance with, and is so justly looked up to by, the Coorgs, informs me that he thinks one or two lads could qualify for the lately modified upper subordinate examination in eight months, so that, with the next official year, we might be in a position to introduce this new element into the Department. It must, however, be clearly understood that no Coorg will leave his country, and a guarantee must, therefore, be given them that they are not to be transferred to other parts of India. Till this change can be effected, matters must be kept going by transfers of steady men from the Mysore Department.

164. *Travelling allowances.*—But whatever decision be arrived at on this point, the travelling allowances of all men in the Department must, if possible, be at once increased; the present ones, with the present ruling high prices of living, being altogether insufficient.

165. *Cost of living.*—After every enquiry from officials and non-officials, I find the charge for a common cart vary from Rs. 40 to 45 per mensem; the keep of a pony with horse-keeper to be Rs. 25; gram 8 to 12 seers, and rice 10 seers for the Rupee; 5 small loaves of bread (I tried myself to eat this stuff and failed) for the Rupee; a small chicken is six annas, and milk and potatoes at fearful prices. One very respectable European Sub-Overseer informed me that, although he was paying his servant Rs. 10 per mensem, the man was going to leave him, and that he had been compelled for the most part to live on salt fish (which comes up in great abundance from the Coast) and rice. A large supply of warm and even water-proof clothing is an essential in Coorg, and the wear and tear most expensive. For all these and other reasons, which I have not space to enter upon, I trust the Government of India will see fit to extend to Coorg a ruling already, I understand, having force in the Hyderabad Department, namely, that when the charge for a common bullock cart exceeds one Rupee per diem, the Controller shall have power to pass double travelling allowances in all cases.

166. In conclusion, I think it right to state that Mr. Stoddard has throughout the last three years devoted himself with the most praiseworthy energy and intelligence to the performance of his duties, which,

I presume it will now be recognized, have been from the first of the most trying description.

P. S.—Since writing the above, I have incidentally learned that the same hurrying down of floods adverted to above, accompanied by breached roads, and blown up bridges followed the first clearings in Ceylon, but that some kind of equilibrium of late years has been established by a sensible falling off of the yearly quantity of rain to the extent of one-third the previous amount. My informant, however, could neither afford me accurate information nor refer me to any printed record.

Should after enquiry prove this to be well founded, a serious question will follow as to the effects of clearings on the summer water of the Cauvery, and the irrigation dependent thereon.

Memorandum by Colonel E. Lawford, R. E., *Chief Engineer of Mysore, on* Major Sankey's *Report on the state and prospects of the P. W. Dept. in Coorg,—dated* 13*th November* 1865.

The very able and exhaustive paper drawn up by Major Sankey, after a fortnight's tour of inspection in Coorg, would seem to leave room for no more to be said on the subject; but it may be desirable to show how entirely I concur in his views, and the extreme importance I attach to them.

2. Although the probable effect of the extensive clearance of hill ranges from their primeval forest in diminishing the amount of rain-fall has often been asserted, and sometimes questioned, it has never before, that I am aware of, been shown that the immediate and certain consequence of such denudation is to bring down the floods produced by the monsoon rains with increasing rapidity and volume, to the destruction of roads and bridges constructed before such clearance was effected; and that such has actually been the case in Coorg, is indisputably established by facts now traced to their origin for the first time.

3. But the question has a far wider scope than that of communications, as hinted in Major Sankey's postscript, and should be considered in its possible influence on the great river, which is fed by the streams descending from the hills that have been turned into coffee plantations extending over a range of 240 miles from north to south, and covering an area of at least 6,600 square miles, according to the calculation of Colonel Mackenzie, or from Munzerabad in Mysore to Puluey in Madura.

4. Whatever be the cause, it is certain that during the last five years the freshes of the Cauvery in Trichinopoly and Tanjore have attained a height previously almost unknown, and if this is in any degree due to the influence which has certainly destroyed the roads and bridges in Coorg, the subject is one for deep anxiety, for there is little doubt that, in the course of time, the Annamallays and Pulneys will be covered with plantations, as the Neilgherries and the hills of Wynaad, Coorg, and Mysore are now.

5. It is not only the floods that are to be dreaded as the effect of this interference with nature, but the opposite evil of drought; for it is certain that the most perennial streams (except such as are snow-fed) are those which flow from thickly wooded hill ranges, a fact clearly shown in the

drainage of the opposite sides of Bababooden Hills in Nugur, and thus the scarcity of water always felt in Tanjore between the monsoons may be seriously aggravated.

6. Be the correctness of these views what it may, it behoves me, on starting them, to consider if any means can be suggested for meeting and overcoming an evil which seems to attend the improvement of Coorg at the expense of Tanjore, once the "Garden of India."

7. More than 30 years ago, it was shown by Sir Arthur Cotton that the construction of reservoirs in the valleys of the Neilgherries and other ranges was a work of the utmost importance to sustain the precarious irrigation the Cauvery Delta; and though no practical results followed his suggestions, the subject was seriously taken up by the Madras Government about 9 or 10 years ago, when Engineers were expressly appointed to discover suitable sites for such works, and yet, after all, the project has been entirely dropped.

8. With the light of experience since thrown on it by the labors of the coffee planters, the question might now be revived with the double prospect of restraining the increasing floods, and preventing the threatened failure of summer water, and there is no doubt that Madras and Mysore are both deeply interested in the investigation; for if by the more rapid flow of the drainage, the hill springs should gradually fail, the rice cultivation even of Coorg and Waynaad must eventually suffer.

9. The comprehensive view taken by Major Sankey of the best means of improving the main Ghât Roads, and opening the interior communications of Coorg, is, in my opinion, perfectly correct, and it is only from the want of information as to the actual state of these roads, and their immense value to the country, that the Government of India has hitherto formed such limited ideas of the means required for their adequate improvement, but it has been impossible for distant authorities to judge fully of the circumstances which are now so distinctly reported.

10. Coorg has been a wilderness, and is fast becoming a garden, the produce of which will be valuable in proportion to the facilities of export, which all our present efforts fail to improve correspondingly with the spread of cultivation.

11. Coorg has a climate which permits of Public Works being carried on for only six months in the year, except such trifling repairs as can be effected in the monsoon, and the scarcity and dearness of labor, exceeding any thing known in Southern India, are on the increase.

12. One Executive Engineer is wholly incapable of conducting even the present works, still less of attending to those details of business now so rigorously enforced.

13. European Subordinates can barely exist on the ordinary allowances of the Department, and Coorgs as yet are not qualified for any but inferior grades, while Natives even of Mysore will not accept such employment as we offer in Coorg if they can obtain anything else.

14. Coorg in its present state is not fit for the reception of a strict Departmental system, governed by authorities who are as remote in effect as if in England, and it never will be carried through its difficulties unless thorough confidence is given to the local officers, and such

latitude of action as may enable them to seize opportunities, and use such means as they find absolutely necessary; and such apparent irregularity will, beyond doubt, be found really as conducive to economy and efficiency, as rigid enforcement of rules adapted to other Provinces is decidedly the reverse.

From LIEUT. COLONEL C. H. DICKENS, R. A., *Secy. to Govt. of India, P. W. Dept., to Commissioner of Coorg,—No. 35 C, dated 13th January* 1866.

I am directed to acknowledge the receipt of your letter No. 442—23, dated 15th November last, submitting, with your own observations and the Chief Engineer's remarks on the subject, an interesting Memorandum by Major Sankey on the state of communications in Coorg.

2. Major Sankey's Memorandum sets forth his views as to the changes in the physical condition of Coorg, which are being caused by the clearances effected by the coffee planters; the effect which these changes have on the floods of the various rivers rising in that Province, and on its roads; the present condition of the roads, finished or in progress; the future requirements in the way of roads, with a rough estimate of their probable cost; the manner in which these charges should be distributed amongst the different Provinces which are, or will be benefitted by these roads; and, lastly, the increase which is necessary to the Public Works Establishments in the Province, in order that the programme sketched by him may be carried out within a reasonable period.

3. It is not necessary for the Governor General in Council to notice in detail the many important points embraced in Major Sankey's Memorandum, or the arguments advanced by that Officer in support of his views. I am, therefore, directed to state shortly the conclusions arrived at by the Government of India on the main points.

4. I am to refer first to the increase of floods, consequent on the clearances which are being carried out, the effect which this increase is likely to have on the rivers which drain the lands, and Colonel Lawford's proposal that reservoirs be constructed in the hills with the double object of restraining floods and preventing the failure of summer water. The attention of the Madras Government will, as suggested by you, be drawn to the subject. A detailed investigation, with a view to carry out projects for forming reservoirs, should further enquiry prove it to be necessary and feasible, does, on the information now supplied, appear to His Excellency in Council to be desirable, and it is possible that, in the enquiries made some years ago, and which are referred to by Colonel Lawford, such information may have been supplied as will assist the Government of Madras in arriving at a conclusion on the subject.

5. In connexion with this point, I am also to notice the necessity of basing calculations of the water-way of bridges on the data of drainage area and rain-fall, instead of the sectional areas of rivers in previously recorded floods.

6. Next, as regards the injury caused to the roads by the clearances referred to, it is observed that Major Sankey urges the necessity of preserving a belt of low jungle, 40 or 50 yards wide, both above and below

all roads. This suggestion seems worthy of adoption, and the clause said to be now inserted in all title-deeds, to the effect that no land is to be cleared within five yards of a road, does not seem to His Excellency in Council to meet the requirements of the case, for there is little doubt that, on a steep hill-side, a belt of five yards will not do much towards the preservation of a road. Measures should also be taken for resuming a proper width of land bordering roads already constructed in those places where the nature of the soil is such as to render it advisable to replant the hill-sides for a short distance, as in the case of the Verajendrapett Ghât. If this be not done, it is likely that large sums will be required annually for the repairs of slips.

7. It would be premature now to discuss in detail the proposals made regarding roads under construction, but I am to observe that the Government of India will be prepared to consider favorably projects for perfecting existing roads by improvement of gradients and metalling, which work should take precedence of new roads. I am to add that the Governor General in Council approves generally of the following proposals :—

The abandonment of the present line between Verajendrapett and Bettingal, the new road to south-east towards Waynaad being taken in hand as soon as funds may be available.

The omission of the two bridges over the Mahadapoor and Huttyhully Rivers on the Mercara and Codlipett Road, and the preparation of a project for bridging the Cauvery at Moornad, the latter being dependent on the former.

The postponement of a system of pack-bullock roads : particular care should, however, be taken to procure reliable data for constructions of this kind on the road to Waynaad, which it is proposed to commence.

8. The new work to be done in the next four years, according to the statement submitted by Major Sankey, omitting the item for new pack-bullock roads, is as follows :—

	Rs.
Re-construction of 16 miles of Ghât	1,28,000
Completing Codlipett and Mercara Road	50,000
Making Verajendrapett and Seedapoor Road .	30,000
Cauvery Bridge at Moornad	60,000
Re-building Conicopal Bridge	26,600
Minor Works, say	12,100
Total New Works ...	3 07,000

to which the metalling of the Ghât Roads, estimated to cost Rs. 3,74,192, should be added, the first metalling being properly classed as a new work instead of as a repair, as in Major Sankey's Memorandum. This would bring the required grant for work of this kind up to Rs. 6,81,192.

9. The repairs to road surface during this period would, according to the estimate submitted, cost Rs. 37,770 annually. The annual requirements for four years for communications in Coorg would thus be about two lakhs, if the estimate of the cost of metalling, and that for repairs, be accepted.

10. But, in the first place, it is to be observed that the cost of metalling is now estimated at Rs. 4,693 per mile, whilst an estimate

submitted for this work in June last averaged Rs. 2,213 per mile, and this rate was objected to by the Government of India, further information being called for in Public Works Department letter No. 755 C, dated 22nd July 1865. Again, this rate is not only the estimated cost of first metalling, but of subsequent renewals, and the estimated cost of annual repairs, distributed over the whole length (98 miles) of road metalled and unmetalled gives an average rate for repairs, after the first consolidation of metal is completed, of Rs. 1,340 per mile, whereas, in June last, Colonel Lawford estimated the cost of maintenance at Rs. 250 per mile; vide his letter No. 800, dated 19th June 1865.

11. The Governor General in Council is not prepared to accept the high rates now said to be necessary, both for original metalling and for subsequent renewals, without further evidence as to its necessity, and some explanation of the large discrepancy between these estimates and those so recently submitted.

12. It is, however, clear that the present Public Works allotments to Coorg can go but a short way towards bringing the Ghât Roads into order, and the Government of India admits that the province has special claims to consideration, being a thriving European Colony, and the centre of a large and increasing trade. On these grounds, an increase of Rs. 25,000 has recently been made to the original Budget Grant for the year 1866-67. When the Budgets for the coming official year are before the Government of India, it will be in a position to decide whether, with reference to the requirements of other provinces, any further sum can be given for that year. But, with reference to the limited amount available for expenditure on Public Works, it will be desirable not to undertake at present any new works, such as the road from Verajendrapett to Seedapoor, but to devote to roads already in progress all the funds available. Large bridges too, like that over the Cauvery at Moornad, should stand over until the hill roads are metalled, unless the rivers proposed to be bridged form serious obstacles for a large part of the year.

13. It is not necessary to notice the question of Establishment raised by Major Sankey, as no definite proposal is made by you on this point.

APPENDIX No. III.

ANNUAL PROGRESS REPORT OF THE DEPARTMENT OF PUBLIC WORKS IN COORG FOR THE YEAR 1865-66.

The actual outlay in Coorg during the past official year was Rs. 1,04,049, while the Budget assignment was Rs. 1,00,000, with Rs. 3,474 added as a grant in aid for Imperial Works from the unexpended portion of the Income Tax of the previous year; there has, therefore, been a very slight excess of expenditure above sanction as follows :—

Budget Heads.	Sanctioned Budget Allotments.	Expenditure.	More.	Less.
	Rs.	Rs.	Rs.	Rs.
Original Works ...	58,650	61,450	2,800	...
Repairs	17,850	20,421	2,571	...
Tools and Plant	2,000	1,614	...	386
Establishment	21,500	20,549	..	951
Profit and Loss		15	15	...
Total ...	1,00,000	1,04,049	5,386	1,337
Add Income Tax Allowance ...	3,474	1,03,474		
	Difference more	575		

The above outlay was thus distributed under the several Heads of Service.

Class.	Original Works	Repairs	Total.
I. Military	...	..	...
II Civil Buildings	1,450	1,422	2,872
III. Agricultural			
IV. Communications .	60,000	18,999	78,999
V. Miscellaneous Public Improvements ..	...	...	...
Total of Works ..	61,450	20,421	81,871
Tools and Plant ...		...	1,614
Establishment ...		...	20,549
Total Rs. ...			1,04,034

ORIGINAL WORKS.

Civil Buildings.

1. One minor work was executed by the Superintendent to the amount of Rs. 1,000 under this head, and Rs. 450 were expended in completing the Overseer's Lodge at Veerajendrapett.

Communications.

2. The most important work here is the *Mercara-Codlipett Road*, upon which Rs. 10,813 were expended. For this sum 6¾ miles of road were widened from 3 and 4 yards to 7; large quantities of rock were blasted, and extensive revetments constructed. A cause way was also constructed across the Hutty River, which is the largest on the line, and the one already existing over that at Mahadapoor was coated with concrete and gravelled, thus rendering the passage of both the rivers easy during the greater portion of the year. In the matter of bridges five (which had been arched during 1864-65) were completed, as also two more which had only been brought up to the springing during that year; of five others commenced in the year under review, three were finished, besides several drains. Had it not been for the closure of all work on this line of road by late Budget Orders, all these bridges, &c, would have been rendered trafficable by this time.

3. The re-metalling of several portions of the roads, and especially the Ghât Roads, has received attention to the limit of funds at disposal, as shown in the margin. On the Sumpagi Ghât 6½ miles were metalled, and sufficient material prepared for 2 miles more; while in the Periambady Ghât 5½ miles were metalled and material prepared for an equal quantity. Large quantities of rough stone were in both cases stacked ready for breaking, and altogether the work actually performed has been greater than the expenditure would indicate.

	Expended. Rs.
Mysore-Mangalore Road.	5,793
Mysore Cannanore ,,	2,976
Sumpagi Ghât ...	2,565
Periambady ,, ,,	3,673

4. Rupees 1,042 were also expended in metalling half a mile on the Mercara-Periambady Road, and in quarrying and collecting rough stone for next year.

5. The projected line from Verajendrapett viâ Seedapoor to Fraserpett was practically at a stand-still for want of funds.

6. Of seven projected cooly lines at different places on the main roads, two were finished, the walls of four were raised, and the remaining one about half built. It is anticipated that these buildings, which should prove of the greatest possible service in maintaining labor for repairs throughout the monsoon, will be finished immediately. The year's expenditure amounted to Rs. 3,907.

7. Rupees 1,581 were expended in completing the bridge, at the 12th mile on the Sumpagi Ghât, which had been carried away by the severe floods of 1863; a slightly larger amount was also laid out, in work to the Mootramoody Bridge, on the Mercara-Veerajendrapett Road, but the work had to be suspended for reasons which it is unnecessary here to specify.

8. Rupees 1,586 were laid out on another small work in the same quarter, and a further sum on work to the embankment across the Pandymaud Valley.

9. The reconstruction of the Gonicopal Bridge has not advanced from the want of final sanction, and the subject has again been referred back for consideration. The only actual work done consisted in raising one of the abutments, and manufacturing materials. A small arch in the approach to the above was nearly completed at an outlay of Rs. 488.

Estimate, Rs. 23,700
Outlay, „ 2,756

10. Work to the extent of Rs. 2,334 was also executed, in raising three bridges with embankments at Bittengal, on the Mysore-Cannanore Road.

11. All these minor works to the bridges form portion of a series of modifications which have been rendered necessary on the Coorg Roads from the damage inflicted by floods during late years, and which has been attributed to the extensive denudation of forest land for coffee cultivation, whereby it is supposed that the floods are being brought down with yearly increasing magnitude. Much more of the same kind of work remains for subsequent years as funds admit.

12. The timber trussed bridge at Kakytoodoo (foot of the Periambady Ghât) was completed. Twelve drains were built on the Mysore-Mangalore Road, and a few others on both the Sumpagi and Periambady Ghâts; but the progress on all has been slow from almost insurmountable difficulties in regard to labor.

13. The new Moosafirkhana at Wootacolly, on the Periambady Ghât, was completed. The roof of this building has been formed with Messrs. Wallace and Son's galvanized tiles, and although their fixing was imperfectly performed (the artizan sent out for the work having died shortly after commencing work), the result is very promising, and clearly establishes the utility of this description of roof in Coorg. Its durability has, however, yet to be tested.

REPAIRS.

14. But little work worthy of note was executed, excepting under the heading "Communications," the chief expenditure here being as shown in the margin.

	Rs.
Mysore-Mangalore Road	6,128
Mysore-Cannanore do.	8,194
Mercara-Periambady do.	2,439

15. On the Mercara-Fraserpett Ghât between Sonticoopal and the 4th mile out of Mercara, several portions of Ghât, which were barely passable throughout last monsoon, were effectually dealt with.

16. On the Sumpagi Ghât, communication was at one time entirely cut off by some 70 yards of road being bodily carried away at the 10th mile, and which required a considerable expenditure of means to repair. A good deal of blasting had to be employed here, as well as the construction of a revetment below, to prevent further encroachment of the stream at foot of the breach.

17. Very heavy slips occurred also on the Mysore-Cannanore Road, all of which had to be secured with revetments; also the wings of several of the bridges along the line had to be given temporary support, and much of the roadway re-formed. During last monsoon, the Periambady Ghât was almost impassable in its lower portions, but by unremitting exertions, the whole line is now reported in fair trafficable condition, though of course by no means up to standard.

18. Slips, and the washing away of a bridge, interfered temporarily with the traffic of the Mercara-Periambady Road.

19. On all these lines, in addition to the above emergent repairs, the ordinary surface repairs, clearing of side drains, removal of slips, revetting numerous small breaches, blasting protruding rock, cutting and clearing away fallen trees, &c., absorbed a very large portion of the repair allowances, which, up to the present time, have been altogether insufficient for dealing with Ghât Roads exposed to the fury of a Coorg monsoon.

ESTABLISHMENT.

20. The charge for Establishment, Rs. 20,549, was 19·4 per cent. on the total outlay, and slightly under the amount originally sanctioned.

GENERAL OBSERVATIONS.

21. Although more has been expended during the year under review than in previous ones—and it is hoped to better purpose—there can be but little doubt that, as regards the general work and utility of the Department, matters have been in anything but a satisfactory state.

22. The health of one of the Upper Subordinates, who promised well at the commencement of the year, broke down, necessitating his removal, and his successor was dismissed for misconduct. Of four Lower Subordinates, two had very soon to leave from ill health, and one has since died. As may be readily inferred, these several casualties in an Establishment of wholly inadequate strength has at times almost brought work to a stand-still.

23. Three natives of Coorg, who had been recommended by the Superintendent, were tried in the position of Lower Subordinates, and although in some respects they have not realized the expectations entertained, the experiment may be said to have been on the whole fairly satisfactory.

24. The Executive Engineer finds that these men have as great a dislike to employment on the Ghâts, and in unhealthy localities, as men of any other race, and it was only with the greatest difficulty that one of them could be induced to go even for a short time into South Coorg. It is much to be hoped that some effectual remedy may be found for their peculiarities, as other sources of supply having now failed in the most disheartening manner, this is now almost the only one left.

25. Not only has sickness among the Subordinates, and the insufficient strength of the Establishment, contributed to hamper most seriously the utility of the Department, but the continued high prices of all the necessaries of life make it much to be feared that, unless compensation be given in the shape of higher travelling allowances, or other means be devised for securing the services of men with the requisite qualifications, but little real improvement can be looked for. The appointment of an Assistant Engineer is, however, even now more essential.

26. Several of the works executed during the year were on contract, and the result has been on the whole sufficiently encouraging, though, for the most part, the men were behind time in finishing the works.

27. The Executive Engineer, Mr. Stoddard, has worked with his usual praiseworthy zeal and intelligence, and Sergeant Fitz Gibbon, lately promoted to Supervisor, also merits creditable mention.

28. A Memorandum from the Controller on the progress of Account, during the year under review, is herewith appended.

BANGALORE;
CENTRAL OFFICE,
18*th June* 1866.

R. H. SANKEY, *Major*, R. E.,
Officiating Chief Engineer.

Memorandum by Lieut. Colonel F. NEPEAN SMITH, *Controller, P. W. Accounts, Mysore and Coorg, to Chief Engineer of Mysore,—dated Bangalore,* 19*th June* 1866.

The Accounts of the Coorg Province are up to date.

2. The outlay for the past year has been Imperial Rs. 1,00,575; Local, Rs. 3,474. Total, Rs. 1,04,049, against an Imperial Budget Grant of Rs. 1,00,000, increased by a balance of Local (Income Tax) Grant of previous year of Rs. 3,474; total Rs. 1,03,474.

3. On Original Works, Rs. 61,450 have been spent. On Repairs, Rs. 20,421. On Establishment, Rs. 20,549. On Tools and Plant, Rs. 1,614. Profit and Loss has been Rs. 15, and on Stock the excess on 30th April 1866 over the balance, which existed on 1st May 1865, has been Rs. 2,142, thus making a net difference of Rs. 2,717 of outlay over Budget allotment. But when it is explained that this excess has been exclusively caused by the Bangalore Division having sent "Stock" to Coorg to the value of Rs. 2,724 *at the end of April* on account of the Superintendent's Office at Mercara, a supply which obviously could not have been anticipated by the Central Office, it will be at once admitted that the Budget Grant has been *very* closely adhered to.

N. B.—This supply of stock should have been debited at once to the work for which it was intended, but was not so. This, however, would not affect the main question of excess over Budget.

4. The accounts for Public Works operations of the Executive Engineer and Superintendent are submitted in the prescribed manner and regularly booked. No deviation whatever is permitted.

5. The new system of account is beginning to be better understood by the Executive Engineer. There has been serious arrear in rendering the monthly accounts during the year, principally owing to the former Accountant supplied to the Division, who was possibly sent out with more zeal for the introduction of the new system ordered by the Government of India than the scanty knowledge and poor application of the man warranted, but the new Accountant has worked well and continues to give much satisfaction.

6. The Stock of the Province amounts to Rs. 4,622, but of this Rs. 2,724 is a recent addition, as afore explained, and will soon be utilised for its legitimate intention; whilst the "Miscellaneous Advances," which were Rs. 6,102 on 1st October 1865, are now reduced to Rs. 2,788, and are being *rapidly* still more brought down. Advances for labor, however, must, I fear, for some time to come be a great difficulty in Coorg, owing to the competition of coffee planters, who keep up the necessity, but what is requisite is to insure all advances being worked off, and not allowed to remain *outstanding* beyond a reasonable period.

7. In conclusion, I beg to notice with approbation the zeal and industry of C. Termel Row, Probationary Accountant, 4th Grade, in bringing up arrears of accounts under considerable difficulty.

APPENDIX No. IV.

REPORT UPON SCHOOLS IN COORG BY THE REV. G. RICHTER, PRINCIPAL OF THE MERCARA GOVERNMENT SCHOOL.

39. This day ten years ago, I entered upon my duties as Head Master of the then styled "English School of Mercara" under the auspices of Dr. Moegling. It was no encouraging undertaking. All the Coorg officials were against the School, and only *one* Coorg youth, Colawanda Cariappah, now Soobadar of Mercara Taluq, was courageous enough to brave the opposition and displeasure of the Headmen and to attend the School.

Review.

Origin.

40. He was amply rewarded. His career was hitherto most successful, and his example exercised a great influence over the minds of his countrymen. To-day there are 91 *Coorg* boys in the Central School, and almost every one of the younger officials in the different Offices has there received his education. We may then well say, after the tenth year of the School's existence, that the stage of its childhood, with the many vicissitudes and struggles for life and healthful development, has safely passed away, and that we are now on the threshold of cheerful boyhood and vigorous youth. May this time prove the happiest and brightest period of our existence, and pave the way to a sound and sober maturity of our institutions without old age and decay ever creeping upon them.

Progress.

41. It is to the kind interest in education shown by our Native and English friends; it is to the hearty encouragement and liberal support of a wise and paternal Government; it is to the blessing of God upon our labours—and we offer our grateful acknowledgment—that we own our success so far; and since we may rely on the stability of all these agencies co-operating also in future on behalf of the School, there is no fear that it will ever languish or succumb in its prime of life.

Causes.

42. The staff of teachers has been further increased by the arrival of a first Assistant in the person of Mr. Graeter, who with great devotion and cheerfulness entered upon his duties in May 1865, and it is my pleasing duty to congratulate him on his success in the second class. The esteem and confidence he has already secured for himself amongst all the scholars speak best for his qualifications as a teacher. Coming from Switzerland, the acknowledged arena of athletic sports, it is but natural that he should have infused new life into the gymnastic exercises previously here introduced. The boys have, under his able guidance, made considerable progress in gymnastics, and I am sure, the regular exercises have proved a decided benefit to many boys; whilst they grow healthier and stronger in body, they become also more vigorous and courageous in spirit. Occasional excursions with the whole school are undertaken to put the bodily powers of the boys to the test. It was an imposing and most uncommon sight for

Teachers.

Mr. Graeter.

Excursions.

India to behold some months ago a cavalcade of about 20 Coorg boys, most on Pegu ponies, on an excursion with their teachers to Nalknaud Palace, whence we ascended Tadiandamol, the highest mountain in Coorg. The strength, agility, and endurance of the Coorg boys outstripped even experienced Swiss pedestrians. It is from the top of their mountains that the Coorgs look down upon their beautiful country with patriotic pride and delight, and certainly I never saw my Coorg pupils more cheerful and high-spirited than thereon the summit of Tandiandamol, when they were rolling down huge stones over the precipices on the imaginary heads of an advancing body of Moplas, or when, on their descent, they set the whole mountain in a blaze burning away the long dry hill grass. The sportive joyousness of youth proved contagious even to older and wiser heads.

43. Another general lesson which is likewise much appreciated by all the boys is *singing*. Upwards of 50 songs and hymns in English or Canarese have been practised and learnt by heart during the year, and these songs find already their way into the homes of the boys and resound in distant Nads. Four of the more musical boys are taught by the Principal to play the Harmonium, and their progress is encouraging.

Singing.

44. *Free-hand drawing* is being taught by Mr. Graeter in the three upper classes, and there are some boys who evince talent for this accomplishment.

Drawing.

45. The highest or first class, taught by the Principal, is now in the middle of the second year's course, comprising: 1, "*Letters to Indian youth*," a most impartial and temperate enquiry into the evidences of the Hindoo, Parsee, Mussalman, and Christian religion; 2, "*Outlines of Ancient History*;" 3, "*History of India*" (Mr. Garrett's) up to the 35th Chapter; 4, *Geometry* near the end of the III*rd*. Book of Euclid; 5, *Geography*, a general survey of the globe and the countries of the first six historical periods in particular, according to the "Epitome of geographical knowledge" of the Irish National School-book Series. The geographical lessons thus correspond with the lessons of ancient history of the same countries. 6, *Map drawing*, the theory and practise of geographical projections, and drawing of the maps of the five Continents; 7, *Arithmetic*, decimal fractions, the double rule of three after the German method, involution, and evolution; 8, *Algebra*, Bridge's treatise from the beginning to simple equations with two or more unknown quantities; 9, *Surveying*, theory according to the Irish treatise, and practise in the field; 10, "*Natural Philosophy*," Dr. Lardner's School-book up to Hydrostatics; 11, *Composition*, practical exercises, descriptive essays with correction; 12, *English Grammar*, Morell's Grammar and Analysis.

Studies.

46. Besides these lessons in English, Mr. Kamsika instructs the first and second class together in Canarese Prose (Katha Manjari), Grammatical Analysis, and Phrase Book, and Mr. Shankerao introduces both classes into the study of Canarese Poetry (Anthology). Shaik Imam, the zealous Hindoostanee teacher, gives daily a lesson to each of the four upper classes, and the progress of the boys in reading, writing, and learning by heart of Hindoostanee is most satisfactory. Thus every boy, who passes through the whole course of instruction, obtains not only a competent knowledge of

Canarese.

his mother-tongue, but also a grammatical acquaintance with Hindoostanee, besides a liberal education in English.

Other classes.

47. The lessons of the 2nd, 3rd, and 4th classes respectively, under the instruction of Messrs Graeter, Kamsika, and Shankerao are similar to each other, but of different gradations. Bible History, Indian and English History in Canarese and English, Geography, Arithmetic, Grammar of both languages, Reading, and Writing are severally taught, and praise is due to the effective and energetic labors of Mr. Shankerao for laying a solid foundation in these elementary subjects, which are carried further with quiet and modest conscientiousness by Mr. Kamsika. Mr. Graeter has commenced with the second class the peculiar course of geometrical drawing, with the needful definitions, preparatory to the study of Euclid in the first class. The course of instruction in the three upper classes is now so arranged that the scholars have to remain for two years in each class.

48. Shiviya is in charge of the purely Canarese Class, in which a simple knowledge of Canarese reading, writing, and arithmetic is acquired, and through which every beginner has to pass. The Hindoostanee Class is for Mussalman boys, who are satisfied with a knowledge of the same elementary subjects.

Annual Examination.

49. On the last day of November 1865, the closing act of the annual examination took place in the spacious hall of the boarding-house. There were 22 prizes provided for the boys through the liberality of some Native and English friends. The interesting proceedings, presided over by the Superintendent of Coorg W. H. Kerr, Esq., and witnessed by all the Native officials and almost every English resident in Mercara, terminated with a display of gymnastic feats, enlivened by the band of the 15th Regiment, which the Colonel kindly allowed to play. At the suggestion of Mr. Kerr, a prize fund has been organized, and a goodly sum collected and placed at the disposal of the Principal for prizes to be competed for at the next examination.

New School Buildings.

50. A whole year has been lost through want of ready funds. In November last the old school-house might have been sold for Rs. 6,500; this offer was made, but Government had not yet decided as to how it should be disposed of, and even now the question remains unsettled, which may occasion the loss of another building season, especially as the party, who made that offer, has meanwhile built a new house. I acknowledge, however, with gratitude the further grant by Government of Rs. 3,000 towards the completion of the new school-house; this sum, together with the proceeds of the old school-house, will be sufficient for the purpose, but before I have all the money ready, it would be rash and venturesome to commence building. Having finished the Principal's new dwelling after the monsoon, I occupied it in November last, and am now on the spot to superintend the building of the new school, which, I hope, I shall be enabled to commence directly after the ensuing monsoon.

District Schools.

51. The number of District Schools has been increased to 24 from 20 of last year, but owing to the dismissal of the school-master at Virajpett, the actual status this month is 23 schools with 736 boys and about 30 girls; 137 boys are not Coorgs, all the rest are Coorgs, who, together

with the 91 Coorg boys in the Central School, make up a number of 720 Coorg children under Government instruction. Assuming the whole Coorg population to be 25,000, there is one child at Coorg out of every 35 Coorgs; a very fair proportion indeed! There is, however, a decrease in the number of the district scholars of 49 children as compared with last year's return. This may be ascribed to a number of the elder boys having left school without being adequately replaced by new pupils and to a stricter control over the teachers' monthly returns.

Their Character.

52. Regarding the character of these District Schools, my remarks of last year are still applicable, and, under the circumstances, it is a matter of rejoicing that the schools are what they are. All the schools have been inspected with the exception of two, which I was prevented to see on account of fever, just when I was ready to start with the Superintendent whose duty called him to the same district. The new school-houses have nearly all been put into a satisfactory condition, and where they are still incomplete, it is more owing to the procrastination of the local officials than the unwillingness of the people, to whom great credit is due for their readiness in providing these school-houses at their own expense. In Virajpett, where a more substantial building in the centre of the town is required, 21 of the principal inhabitants have agreed before the Subadar to raise amongst themselves Rs. 200, and request Government to grant Rs. 300 in addition to purchase a suitable building. As soon as they shall have deposited with the Subadar the Rs. 200, I shall address Government on the subject.

Coffee Plantation.

53. The school endowment coffee plantation is progressing satisfactorily. Last year, only about 25 acres were planted up, but we expect to have 60 acres under cultivation within a few months. I visited the plantation several times, and have no doubt of the ultimate success of the undertaking.

APPENDIX No V.

EXTRACT FROM THE ASSISTANT CONSERVATOR'S REPORT ON THE CHARACTER AND CAPABILITIES OF THE COORG FORESTS.

1. During the year I have inspected most of the valuable timber forests in Coorg, viz., those of Hoolagoonda, Sullecadoo, Bagerry, and others in the north; the Nalakerry, Arakerry, Hath-Kutnaad, and Titymutty Kanavee jungles in the east; and those of Mangalaparee, Kantha Bilee, and others in the west, as well as several of the Malles in the west and south of Coorg.

Work done.

2. The jungles in the north contain much fine blackwood, honi, mutti, dindaga, and other valuable timber; there is also much stunted teak. Most of the large teak trees in these jungles were felled by the Sappers and Miners several years ago. It is proposed to reserve these jungles as second class forests. The country is flat, and bandies can traverse the jungles in all directions.

3. The most valuable teak forests in Coorg are the Nalakerry, Arakerry, Hath-Kutnaad, and Titymutty Kanave jungles in the Kiggutnaad Talook in the south-east of Coorg. They commence at a place called Mooracull Betta, about three miles from Titymutty, and extend as far as Kuttee on the Wynaad frontier, a distance of about 18 miles in length, and from six to eight in breadth These jungles can be easily worked, the land being flat; besides teak, most of the other valuable timbers are found, viz., blackwood, honi, mutti, dindaga, &c. These jungles should certainly be reserved as royal forests.

Character and capabilities of the forests.

4. The forests on the western side are comparatively poor in timber. Teak is scarce, and what there is, is unfit for felling, but on the Mullehs, poon, troopoo and trul is found, but without the aid of elephants it is impossible to remove the timber, the country being so hilly; the same is the case in the south of Coorg. The only people who buy the timber on the Mullehs are Moplahs, but they have to drag the timber by elephants for several miles to the River Cootoompully, in the south-west of Coorg, from whence they float it to the coast.

* * * * *

C. A. DOBBS,
Assistant Conservator.

Abstract Statement of Jummabundy for

Number.	NAMES OF TALOOKS.		Number of Nads or Hoblies.	Number of Villages.	Number of Cultivators.	LAND.											
						Land Revenue Rented.				Assessment of dry land on Sagoo Tenure.	Assessment of Bagayet land on Sagoo Tenure.	Land Revenue in Kind.			Total.	Jodee on Exams wet and dry land.	Total Land Revenue.
						Assesment of land on Sagoo Tenure.	Assesment of land on Jumma Tenure.	Assesment of land on Woombly Tenure.	Total.			Amount value of grain and dhooly paddy.	Amount value of other species of grain.	Total in Kind.			
1	2		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
						Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
	Mercara.		.	...		.....	... ..	..	.	.....	.....	.....	.. ..	.....	.....	.....	.....
1	Mercara	Taluk . .	5	57	1,316	10,592 9 9	6,606 3 1	1,612 11 1	18,811 7 11	113 7 8	... ..	4,129 5 0	.....	4,129 5 0	23,084 4 7	448 1 2	23,532 5 9
2	Puddynackuad	ditto .	5	55	1,383	5,163 6 2	10,734 4 10	2,019 7 1	18,217 2 1	. .	450 0 9	5,930 3 9	.....	5,930 3 9	24,627 6 7	232 3 0	24,859 9 7
3	Yeddaynackuad	ditto ..	3	49	1,615	25,662 11 8	10,344 10 5	1,462 7 11	37,469 14 0	16 11 2	.. ..	5,121 9 0	..	5,121 9 0	42,608 2 2	800 11 0	43,408 13 2
4	Kiggutnad	ditto .	4	63	1,302	18,306 11 0	16,180 12 0	1,358 9 2	35,856 0 2	.. .	.. ..	4,325 1 0	. ..	4,325 1 0	40,171 1 2	1,603 6 0	41,774 7 2
5	Nunjrajpatten	ditto .	4	115	2,970	5,898 12 4	1,316 3 7	343 0 2	10,558 0 1	7,569 2 3	.....	1,877 11 10	. . .	1,877 11 10	20,004 14 2	787 15 5	20,792 13 7
6	Yelloosuviranemi	ditto .	3	168	2,816	22,973 2 0		9 15 8	22,983 1 8	1,270 10 7	..	. ..	. .	..	24,253 12 3	2,355 7 4	26,609 3 7
		Total .	24	507	11,402	88,897 4 11	48,182 1 11	6,866 3 1	1,43,945 9 11	8,969 15 8	450 0 9	21,383 14 7	.	21,383 14 7	1,74,749 8 11	6,227 11 11	1,80,977 4 10

Superintendent's Office;
Coorg,
The 20th May 1866.

Coorg

the year Krodana or A. D. 1865-66.

Deduct.								Miscellaneous.							Remarks.
Amount reduced on account of waste land as per Hevkoomumah.	Amount of Salary of Potails, &c.	Amount of remission for the failure of crops.	Total.	Remainder or Nett Amount of Land Revenue.	Assessment on Coffee Lands.	Arrears and other rent of Farms.	Mohatarpha including House Tax.	Sandalwood.	Cardamoms.	Minor Forest Produce.	Total.	Income Tax for 1864-65.	Stamps.	Total including Land Revenue.	
18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
....	...	...	.	.	..	1,33,079 15 6	...	...	. ...	860 4 0	860 4 0	453 15 0	14,951 15 0	1,49,346 1 6	
996 2 2	167 15 7	22 15 0	1,187 0 9	22,015 5 0	11,881 15 6	....	1,591 10 0	461 3 7	4,321 0 0	20 3 0	1,805 6 7	848 13 0	1,774 13 6	42,950 15 7	
269 12 6	550 14 0	7 3 0	827 13 6	21,031 12 1	3,108 0 7		824 14 3	... .	17,948 10 7	131 1 11	18,079 12 6	579 0 0	790 8 0	47,413 15 5	
2,404 3 0	707 5 2	137 15 0	3,249 7 2	40,159 6 0	5,195 13 2		2,178 4 3		3,019 12 0	23 1 6	3,042 13 6	627 0 0	1,484 0 0	52,598 7 11	
1,773 8 6	553 6 0	76 1 4	2,403 2 10	39,371 1 1	108 3 0		335 10 9		607 7 0	8 10 0	616 1 0	174 0 0	639 12 6	41,633 12 7	
411 6 4	107 4 8	7 7 0	556 2 0	20,276 11 7	901 11 11		1,287 9 3	8,669 15 6	414 0 0	176 13 8	5,280 13 2	171 0 0	713 4 0	32,594 4 11	
178 4 2	6 2 0	78 13 1	263 3 3	26,316 0 1	53 8 9		852 0 7	21,662 1 5		14 0 0	21,676 4 5	390 0 0	787 4 0	50,105 1 4	
6,063 4 8	2,302 15 5	330 9 5	8,786 13 6	1,72,190 7 4	21,552 7 2	1,33,079 15 6	7,073 1 1	30,813 7 6	26,313 13 7	1,234 2 1	58,361 7 2	3,213 12 0	21,111 9 0	4,16,642 11 3	

R. A. COLE,

Superintendent.

Finance Statement of the Coorg Territories—Revenue and Expenditure for the years 1864-65 *and* 1865-66.

Revenue.	1864-65.	1865-66.
	Rs. A. P.	Rs. A. P.
...nd Tax	1,67,804 12 4	1,69,359 1 2
...arry	1,42,510 10 10	1,24,544 7 9
...e	15,056 7 4	14,049 3 0
... &c.	0 0 0	0 0 0
... Tax	6,866 10 0	4,243 12 0
... ...	17,262 8 3	21,186 8 0
...us	1,02,594 2 4	88,151 14 2
Total Ordinary ...	4,52,095 3 1	4,21,525 14 1
Extra Ordinary ...	16,728 13 9	34,175 0 8
Grand Total ...	4,68,824 0 10	4,55,700 14 9

Expenditure.	1864-65.	1865-66.
	Rs. A. P.	Rs. A. P.
General	3,432 0 0	3,432 0 0
Judicial	12,827 9 0	13,826 14 3
Revenue	77,672 4 1	82,590 5 3
Postal, &c.	4,188 0 0	4,188 0 0
Miscellaneous	15,788 3 1	21,939 9 6
Endowments to religious places of worship, &c.	13,890 3 10	13,890 3 10
Pensions	12,771 5 11	12,718 2 5
Medical	2,471 9 10	2,464 8 0
Educational Instruction	18,160 8 0	9,778 8 0
Ecclesiastical	2,876 8 0	1,783 8 0
Abkarry	43,937 11 0	39,480 7 5
Stamps	831 0 5	1,010 15 9
Total Ordinary ...	2,08,846 15 2	2,07,103 2 5
Extra Ordinary ...	0 0 0	0 0 0
Public Works ...	92,595 0 4	1,06,000 0 0
Grand Total ...	3,01,441 15 6	3,13,103 2 5

...NT'S OFFICE,;
...RG,
...y 1866.

R. A. COLE,
Superintendent.

COORG DISTRICT.

...usiness disposed of in the different Courts in the Coorg District during the official year 1865-66.

	By what Officer.	Area.	Population.	Revenue.	Revenue Business. Disposed of. Cases decided on the merits.	Disposed of. Miscellaneous reports petitioned.	Disposed of. Total.	Pending. Cases for decision on the merits.	Pending. Miscellaneous reports petitioned.	Pending. Total.	Letters. Despatched.	Letters. Received.	Letters. Total.	Remarks.
...STRICT.				Rs. A. P.										
... ...	Supdt. ...	...	.....	.....	27	13,156	13,183	2	135	137	2,408	2,175	4,583	
...ook ...	Subadar ...	...	13,151	34,780 14 0	3	10,229	10,232	9	76	85	17	10	27	
...aud Talook ...	Ditto ...	...	20,908	35,890 10 8	8	6,334	6,342	20	25	45	...	...	...	
...knaud Talook ...	Ditto ...	...	16,512	57,036 13 2	21	9,198	9,219	39	127	166	...	...	...	
...nd Talook ...	Ditto ...	...	17,596	81,506 12 0	7	5,116	5,123	5	19	24	...	...	...	
...djputten Talook ...	Ditto ...	...	23,822	27,879 2 1	...	3,265	3,265	...	15	15	...	...	...	
...saweeraseema Talook .	Ditto ...	...	18,961	28,977 13 4	6	11,866	11,872	5	233	238	...	...	...	
...adropett	Ditto ...	...	2,801	.....	...	3,001	3,001	...	5	5	...	...	...	
...srajenderpett ...	Ditto ...	...	4,436	.....	...	1,576	1,576	3	18	21	...	...	...	
Total ...	.....	...	1,18,187	2,66,072 1 3	72	63,741	63,813	83	653	736	2,425	2,185	4,610	
In 1864-65 ...	.....	...	1,17,972	2,65,639 3 3	129	42,755	42,884	96	851	947	1,841	1,936	3,777	
Increase ...	.....	...	215	432 14 0	...	20,986	20,929	...	198	211	584	249	833	
Decrease ..	.....	...	.....	.....	57	...	...	13	...	...	...	...	...	

SUPERINTENDENT'S OFFICE;
COORG,
The 20th May 1866.

R. A. COLE,
Superintendent.

Statement showing the fall of rain during the official y
1864-65 *and* 1865-66.

Months.		1864-65.		1865-66.		Re
		Inches.	Cents.	Inches.	Cents.	
May	1865	4	72	9	33	
June	„	24	79	22	17	
July	„	74	40	64	82	
August	„	19	0	36	91	
September	„	11	22	9	8	
October	„	3	35	2	84	
Nove er	„	0	98	2	28	
Decen ber	„	1	40	0	0	
January	1866	0	0	0	0	
Febr ary	„	0	0	0	0	
Mar	„	1	23	0	0	
April	„	2	50	1	63	
	Total ...	143	59	149	6	

Superintendent's Office;
Coorg,
The 20th May 1866.

R. A. COLE,
Superintendent.